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PRESENTATION.

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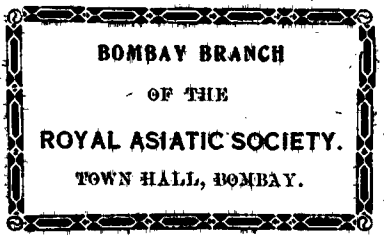

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ENGLISH BOTANY;

OR,

COLOURED FIGURES

OF

BRITISH PLANTS,

WITH THEIR

ESSENTIAL CHARACTERS, SYNONYMS, AND PLACES OF GROWTH:

TO WHICH WILL BE ADDED,

OCCASIONAL REMARKS.

55382

BY

JAMES EDWARD SMITH, M.D. F.R.S.

MEMBER OF THE IMP. ACAD. NATURÆ CURIOSORUM, THE ACADEMIES OF STOCKHOLM, UPSAL, TURIN, LISBON, LUND, BERLIN, PHILADELPHIA, AND THE NAT. HIST. SOCIETIES OF PARIS AND MOSCOW; PRESIDENT OF THE LINNÆAN SOCIETY.

THE FIGURES BY

JAMES SOWERBY, F.L.S.

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VOL. XXV.

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1729

919

Koniga maritima

Apr.1.1807. Published by Jas.ª Sowerby London

ALYSSUM maritimum.

Sweet Alyssum.

TETRADYNAMIA Siliculosa.

GEN. CHAR. *Pouch* nearly entire, bordered, tipped with the style: valves concave, parallel to the partition. Two of the filaments (in some species) marked with a small tooth.

SPEC. CHAR. Stem somewhat woody, much branched, spreading. Leaves lanceolate, acute, entire, hoary with close-pressed hairs. Stamens simple. Pouch compressed.

SYN. Alyssum maritimum. *Willd. Sp. Pl. v.* 3. 459.
A. minimum. *Linn. Sp. Pl.* 908. *Herb. Linn.*
A. halimifolium. *Ait. H. Kew. v.* 2. 381. *Curt. Mag. t.* 101.
Clypeola maritima. *Linn. Sp. Pl.* 910.

PROFESSOR William Duncan of Aberdeen, in the autumn of 1804, sent me specimens of this plant gathered half a mile from the sea in that neighbourhood, but I hesitated to admit as a native what is so frequently cultivated (for its honey-like scent) in gardens. I now hesitate no longer, for my friend Mr. W. J. Hooker has found this *Alyssum* on the maritime cliffs of Devonshire at Budleigh-Salterton, and our specimen was sent from thence by the Rev. Mr. Jervis at his request. On the southern shores of Europe no plant is more common, in dry stony places, flowering in autumn, and even in winter. The above synonyms show how little it has been understood. It is certainly no *Clypeola*, but an *Alyssum*; yet having been never known by the Linnæan name of *minimum*, and that name being exceptionable, we prefer the above. It is not the real *halimifolium*, though it may be Hermann's *t.* 595.

The root is perennial, yet not very durable. Stems numerous, woody, spreading. Leaves alternate, lanceolate, more or less clothed with close-pressed silvery hairs. Flowers numerous, white, fragrant. Their stamens, and claws of the petals, turn purple in decay. Pouches in long clusters, 2-celled, 2-seeded, a little convex.

1730

200

2

1

2

Variolaria agelaea

Ayres Lithr. Published by Jas. Sowerby, London.

LICHEN agelæus.

Inelegant Hollow-shielded Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

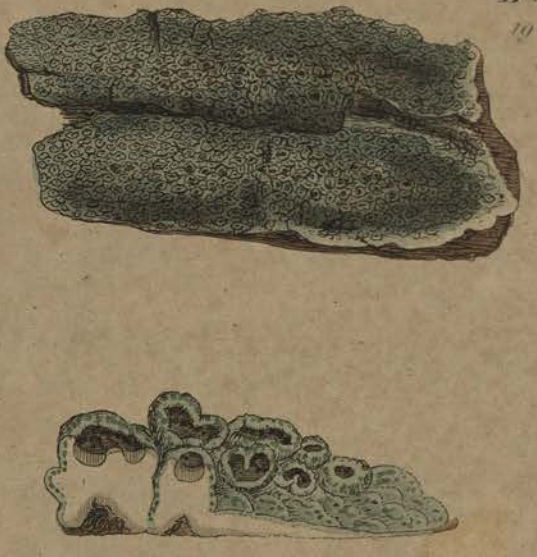
SPEC. CHAR. Crust irregular, thin, uneven, smooth, cracked, greenish white. Shields clustered, minute, hollowish, irregular, greyish black, with an elevated irregular margin of the substance of the crust.

SYN. Lichen agelæus. *Ach. Prod.* 30.
Urceolaria agelæa. *Ach. Meth.* 150.

THIS obscure Lichen is found by Mr. Turner about Yarmouth, and Mr. W. Borrer in Sussex, and is said by those gentlemen to be not uncommon on the barks of trees, though described only by Dr. Acharius from the communication of his learned friend Swartz. We have often observed it in its whitest early state, and have neglected it as a form of *L. fagineus*, *t.* 1713, or *discoideus*, *t.* 1714, from both which however the slightest examination proves it to be distinct.

The young crust spreads in irregular oblong transverse patches round the stems of large trees, and is thin, smooth, somewhat shining, of a pale greenish white, sprinkled with roundish, white, warty cracks. These at length become more elevated, and are separated from one another by angular fissures, which render the crust tessellated. At length, several small blackish depressed shields, extremely irregular in size and shape, appear in each of those warts, every one of which shields is surmounted by a thick shapeless elevated inflexed margin, of the substance of the crust.

1731



Pertusaria fallax

Nov 1 1831 Published by Sir J. E. Smith & Co. London

LICHEN hymenius.

Wrinkled Hollow-shielded Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust cartilaginous, uneven, somewhat polished, greenish grey; at length extremely tumid and uneven. Shields elevated, crowded, hollowish, very irregular, black, with an excessively tumid wrinkled notched margin of the substance of the crust.

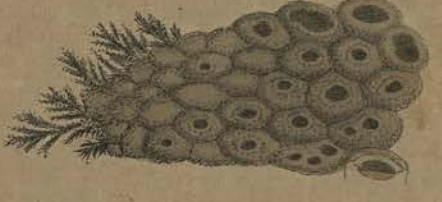
SYN. Lichen hymenius. *Ach. Prod.* 80.
L. pertusus. *Wulf. in Jacq. Coll. v.* 2. 181. *t.* 13. *f.* 2. *Schrad. Spicil. t.* 1. *f.* 5.
Thelotrema hymeneum. *Ach. Meth.* 133.

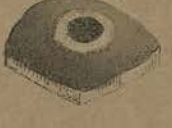
WE first received this from the late Mr. W. Brunton in 1801. It has been long known to Mr. Turner, and is not very unfrequent on the barks of old oaks and other trees. We have Hampshire specimens from Mr. Lyell and Mr. W. Borrer. Wulfen took it for *L. pertusus*, *t.* 677, a mistake which the accurate Schrader easily corrected.

It is remarkable for its extremely wrinkled and prominent aspect, consisting of innumerable irregular crowded elevated warts, each of which bears a blackish depressed shield, of the most irregular figure, enclosed in a very thick, tumid, inflexed, waved and notched margin, of the substance of the wart or crust. The warts cut perpendicularly look like the grinders of some quadruped. The crust spreads indeterminately, and is of a dull greenish grey, white within.

Acharius has formed a new genus *Thelotrema* of this, *L. pertusus*, *inclusus*, and a few other species, which bear their shields in a sort of warts.

1732





Urceolaria gibbosa?

Agate sculpt. Published 1.2. by Jas. Sowerby, London.

LICHEN fibrosus.

Fibrous-edged Hollow-shielded Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust smoky-brown, formed of minute tessellated warts, with a radiated, marginal fringe. Shields immersed in each wart, concave, blackish, with an undivided, elevated, pale margin, of the substance of the crust.

SYN. Urceolaria fimbriata. *Ach. Meth.* 145.

FOUND on flints upon the South-Downs, Sussex, by Mr. W. Borrer, who has justly determined the synonym of Acharius. Mr. Sowerby has observed it to be very common in different degrees of perfection on flinty pebbles in exposed sunny places.

The crust is of an uniform light smoky brown, tessellated, consisting of numerous, crowded, angular, convex, smooth warts, which are less distinct and more polished towards the margin, where they vanish gradually into a thin, dilated, inseparable border, sometimes coloured like the crust, and rather granulated than fibrous; at other times, (where the flint is broken and polished,) blackish, and distinctly radiated like a fringe, bearing scattered rudiments of future warts. Each of the perfect warts bears one, rarely more, small irregular concave shields, with a blackish, somewhat glaucous, disk, and an elevated, pale, undivided, roughish border, of the substance of the crust or wart, and looking as if it had become visible by rubbing. The old shields are so like those of an Acharian *Parmelia*, that we hesitate much about the genus *Urceolaria*, and in that uncertainty have been obliged to change the specific name for the present, as there is an old *Lichen fimbriatus*.

1733

2085

Lecanora tuberculosa

Sowerby, Published by Jas. Sowerby London.

LICHEN tuberculosus.

Warted Fibrous-edged Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust greenish-grey, formed of globular granulations, with a radiated, marginal fringe. Shields sessile, flattish, glaucous-black, with a thick, elevated, smooth margin, of the substance of the crust.

ABOUT as common on the South-Downs of Sussex as our *Lichen fibrosus*, *t.* 1732, according to the observations of Mr. W. Borrer, from whom alone we have received it.

The crust runs over the smooth surfaces of flints, and is in itself extremely thin, of a greenish grey hue, terminating in a more or less distinct, fibrous radiating border. But the whole surface of this crust is nearly covered with small, round, hard, paler granulations or warts, close, but not very much crowded, as the darker basis of the crust is every where visible between them. Such of these warts as are more marginal, and of recent date, are perfectly globular, and prettily scattered over the fibres of the border. Internally they are all white. Among the older warts, but not proceeding from them, grow several scattered sessile shields, larger than the warts, whose disk is concave when young, nearly flat when old, blackish with a glaucous tinge; their margin elevated, thick, smooth, though rather irregular, of the same substance and colour as the warts.

In the system of Professor Acharius this would come into the genus *Parmelia*.———From an imperfect specimen on quartz sent by him we think he may have confounded this species with his *Lecidea dendritica*, which could happen only from his never having seen the shields.

1734

2015.

Lecidea fusco-atra.

Published by Longman & Co. Paternoster Row London

LICHEN dendriticus.

Mocho-bordered Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust greyish-black, thin, circular, with a fine, radiating, compound, inky border. Shields sessile, flattish, coal-black, with a thick elevated margin of their own substance and colour.

SYN. Lichen dendriticus. *Ach. Prod.* 77. *Dicks. Crypt. fasc.* 4. 21.
Lecidea dendritica. *Ach. Meth.* 44.
Verrucaria dendritica. *Hoffm. Pl. Lich. v.* 1. 90. *t.* 19. *f.* 4.

NOTHING can be more common than this Lichen on flint or quartz pebbles in exposed situations, as well on heaths in Norfolk as on the mountains of Scotland; yet it passed long undetermined, and has been taken sometimes for the Linnæan *fusco-ater*, sometimes for *sanguinarius*. The first British botanist who paid any proper attention to it was the late Rev. Dr. Walker of Edinburgh, who, when I showed him a specimen from the Pentland hills in 1782, told me he had named it *quartzosus*. Either this or our *tuberculosus*, *t.* 1733, (I speak from memory,) is extremely fine on the large masses of white quartz which crown the summit of Ben Lomond, and other Highland mountains.

The specific name given by Hoffmann and Acharius, being extremely apt, in allusion to the tree-like appearance in Mocho stones, we adopt it, as very descriptive of this species, the margin of whose crust is an elaborate compound blueish-black fringe of the most exquisitely fibrous structure. The rest of the crust is greyish, in some degree tessellated, thin, hard and smooth, occasionally almost white. The shields are sessile, of the darkest possible black both in their disk and border, yet somewhat shining; flat when young, rather convex when old: sometimes, though rarely, they are ranged in a concentric manner like those of *L. concentricus*, *t.* 246.

1735

2025

Lecidea Griffithii.

May 1.1829. Published by Jas. Sowerby, London.

LICHEN Griffithii.

Griffithian Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust thin, white, smooth. Shields sessile, scattered, pale purplish waxy brown, with a smooth margin of the same colour; blackened in decay.

SYN. Lichen corneus. *With. v.* 4. 20. *t.* 31. *f.* 3. *Hull.* 290, but not our *t.* 965.

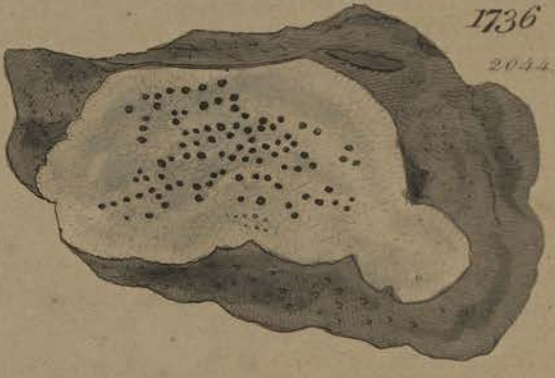
WHAT we have described as *L. corneus*, *t.* 965, proves not to be that of Withering, but a species never before published. As the name is admirably suited to that species, and is now sanctioned in the *Methodus* of Professor Acharius, and as the original *corneus* neither answers to that name, nor could possibly be made out by Dr. Withering's description and figure, we venture to apply to the latter the name of its original discoverer J. W. Griffith, Esq. of Garn near Denbigh, whose labours in this department of botany well merit the honour.

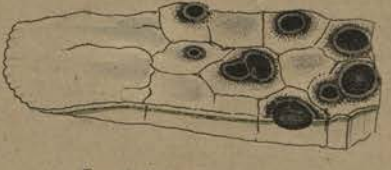
L. Griffithii is found on oaks in Denbighshire and Durham, from which last county we have been favoured with it by the Rev. Mr. Harriman. Mr. Turner finds it common on birch bark near Yarmouth.

The crust is thin, smooth, even and white, conforming to the inequalities of the bark, and spreading indeterminately. Shields scattered, sessile, flat, irregular in shape and size, of a peculiar pale purplish brown, with a waxy transparency, and their border is of the same hue. When young they are paler, especially the border, but by age that part first, and finally the whole shield, turns black. Small black bodies are scattered over the crust, which seem to be old dwindled shields, which if so are very remarkable in their mode of decay.

1736

2044





Lecidea rimosa

May 1.1807. Published by Jas. Sowerby, London.

LICHEN rimosus.

Cracked Chalky Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust circular, white, chalky, cracked, crenate. Shields depressed, black; their margin whitish stained with grey.

SYN. Lichen rimosus. *Ach. Prod.* 62. *Retz. Fl. Scand. ed.* 2. 275. *Dicks. Crypt. fasc.* 1. 12. *With. v.* 4. 25. *Hull.* 292.
L. *Fl. Dan. t.* 468. *f.* 3.
Parmelia glaucoma β. *Ach. Meth.* 161.

OUR specimens of this Lichen were collected by the Rev. J. Holme, F.L.S., on the top of Heartside Fell between Penrith and Alston, Cumberland, where it is very conspicuous on the blue limestone rocks. We have also received it from the Rev. H. Davies, and have seen it in various places, always on calcareous stones.

Its crust is generally circular, of a very white chalky appearance, somewhat elevated in the centre, though not thick; the surface full of angular cracks, though less so than many others; and the extreme edge crenate. The shields are numerous in the central part, not near the edge, irregularly disposed, depressed, scarcely projecting above the level of the crust; their disk flat, opaque, black, having a glaucous-grey tinge when young; their border apparently of the substance of the disk rather than of the crust, yet it is whitish, being only stained, as it were, with grey, which colour is often extended to the crust immediately surrounding each shield.

We are always loth to dissent from Dr. Acharius, whose deep knowledge and candid love of truth render his authority of the greatest weight, but we must consider this Lichen as distinct from his *glaucoma* (the *varians* of Mr. Davies, *Tr. of L. Soc. v.* 2. *t.* 28), nor are we certain that they belong to the same genus in his system.

1737

Lecidea rivulosa.

May 1.1837. Published by Jas. Sowerby London.

LICHEN rivulosus.

Branching-lined Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.

Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust brownish grey, cracked, bordered and intersected by dark serpentine branching lines. Shields scattered, sessile, black, flat, with a wavy margin of their own substance, but somewhat paler.

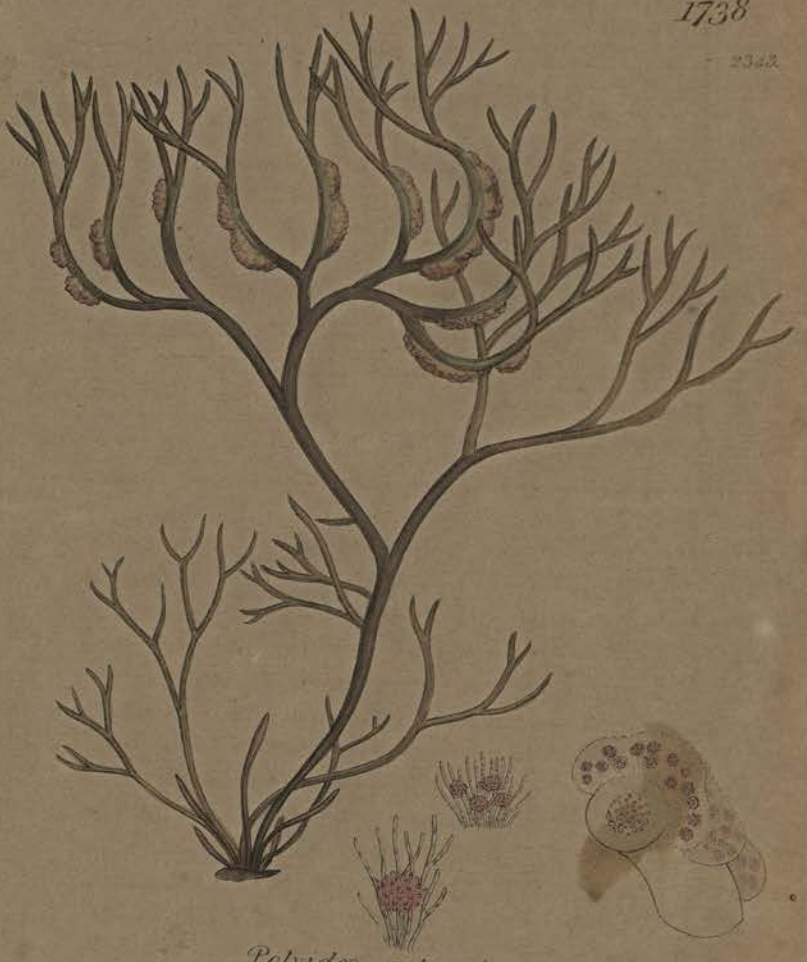
SYN. Lecidea rivulosa. *Ach. Meth.* 38.

IT seems strange that a Lichen so frequent as this is in rocky countries should not have been described by British writers. Our specimens from Mr. W. Borrer and Rev. H. Davies exactly accord with what Dr. Acharius sends for his *Lecidea rivulosa*, as well as with his description of that species. Perhaps it may be the *fusco-ater* of our authors, a Lichen for which any thing of a blackish or brownish cast has been occasionally exhibited.

The common crust is generally compounded of several different individuals crowded into one, and their black undulating edges joined together make several branching lines, but this character is not by any means confined to the present species. Its surface is hard, minutely cracked and tessellated, of a smoky grey, the inside white, of no considerable substance. Shields scattered, sessile, not immersed nor depressed, rather small, coal-black and flattish in the disk, their border elevated, wavy, seldom quite so black as the disk, sometimes much paler and brownish. A crop of small young shields is always interspersed among the larger ones.

1738

2342



Polyides rotundas

Mem. Wernerian Nat. Hist. Soc. Edinburgh

FUCUS rotundus.

Round-stalked Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond thread-shaped, forked, branched; its terminal branches pointed and level. Seeds in lateral, shapeless, spongy, reddish warts.

SYN. Fucus rotundus. *Turn. Syn.* 309. *Gmel. Fuci* 110. *t.* 6. *f.* 3. *With. v.* 4. 110.

F. radiatus. *Gooden. and Woodw. Tr. of L. Soc. v.* 3. 202. *Hull.* 325.

COMMUNICATED from Southampton by Miss Biddulph in November last. It is, according to Mr. Turner, not unfrequently thrown up on the Yarmouth beach in the autumnal and winter months.

The root is an expanded leathery disk, bearing a multitude of fronds various in height, exactly cylindrical, repeatedly forked, purplish brown, the ultimate branches acute and tolerably level at their summits. The divarications of the branches form perhaps less acute angles than those of *F. lumbricalis*, *t.* 824, but are less rounded than in *tuberculatus*, *t.* 726. The fructification of *F. rotundus* best distinguishes it, being lodged in lateral shapeless spongy warts, of a pink or reddish colour, consisting of pellucid, seemingly jointed, fibres, among which are various globules of darker seeds.

F. fastigiatus of Linnæus, a much smaller and slenderer plant, is considered by the accurate Mr. Turner as a variety of this, the proper state of the species being as we have described. Perhaps nevertheless the Linnæan denomination had better have been retained for our plant; for nothing can be much worse than the name given by Gmelin, except the figure in his book.

1539

Enteromorpha compressa

May 1st 1803 Published by Jas Sowerby London

U L V A compressa.

Compressed Laver.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Frond* membranous or gelatinous. *Seeds* solitary, scattered throughout its substance, under the cuticle.

SPEC. CHAR. Frond tubular, more or less branched, compressed, irregularly constricted, green; the branches elongated.

SYN. Ulva compressa. *Linn. Sp. Pl.* 1632. *Huds.* 569. *With. v.* 4. 126. *Hull.* 311. *Relh.* 480.

U. marina tenuissima et compressa. *Raii Syn.* 63.

Tremella marina tenuissima et compressa. *Dill. Musc.* 48. *t.* 9, 10. *f.* 8.

Conferva compressa. *Roth. Catal. fasc.* 1. 161.

COMMON on submarine rocks, stones and posts, as well as in salt-water ditches, and about the mouths of rivers, at all seasons.

The fronds grow in tufts, and are very slender at the base, where they are most branched, the branches being greatly enlarged upwards, tubular but compressed, constricted here and there without any regularity, ending acutely when perfect, but most commonly torn at the summit. The colour is green, the surface smooth and even. No plant varies more in size, breadth, or number of its branches. No fructification has been observed, therefore it is impossible to say how truly this is an *Ulva*. Necker and Roth refer it, and all other tubular *Ulvæ*, to *Conferva*, merely because they are tubular. But this is an unnatural combination; for, whatever the fructification of these plants may be, no one can imagine it similar to those *Confervæ* whose seeds fill the hollows of their joints; still less can it be expected to consist of external capsules,

1740

Drapamaldia glomerata?

May 1 1817 Published by Rev. Society London

CONFERVA mutabilis.

Changeable Gelatinous Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Green. Main stems subdivided, almost colourless. Branches darker, opposite, much branched, tufted, gelatinous in decay. Joints broader than long.

SYN. Conferva mutabilis. *Roth. Catal. v.* 1. 197. *t.* 4. *f.* 6. and *t.* 5. *f.* 1. *Dillw. Conf. t.* 12. *Relh.* 485.
C. gelatinosa γ. *Huds.* 598. *With.* 135, *var.* 3. *Hull.* 332.
C. stagnalis, globulis virescentibus mucosis. *Dill. Musc.* 38. *t.* 7. *f.* 44. *Turn. Tr. of L. Soc. v.* 7. 108.

WE received this a great many years ago from the Rev. Mr. Bryant of Heydon, Norfolk, by the name of "*C. hypnoides* of Sir Joseph Banks," and we have specimens from Switzerland, gathered by M. Du Cros, with the same denomination on the authority of Mr. Dickson. This name, though excellent, must of course give way to the printed one in the valuable work of Dr. Roth, as that is no less unexceptionable, and is moreover sanctioned by Mr. Dillwyn, to whom we are obliged for fixing the synonym of Dillenius.

This does not seem to be a rare plant in fresh-water ditches throughout England, but has been neglected as a variety of *C. gelatinosa*, *t.* 689, from which it is very distinct in the structure, and especially the elongated points, of its fine lateral branches, which turn to colourless jelly in decay. It is also much paler in hue. The main stems are remarkably pale and pellucid, what little colour they have collects in the middle of each joint, as in many others of the genus, nor do we conceive that colour to consist of seeds, which, as Mr. Dillwyn observes, are more likely to resemble those of *C. gelatinosa*. All the joints, but especially those of the dark tufted branches, are broader than long, and a little contracted where they unite together.

CONFERVA Borreri.

Borrerian Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Bright red, capillary, repeatedly branched. Branches all alternate, spreading in two directions, zigzag; the ultimate ones level-topped. Joints cylindrical, about twice as long as broad.

GATHERED on Yarmouth beach, in October last, by William Borrer junior, Esq. F. L. S., to whom the botany of England is so much indebted that we are happy to commemorate his name with this beautiful plant, which Mr. Turner, to whom we are obliged for many remarks concerning it, has destined for the purpose.

C. Borreri grows from a small disk, in tufts about 2 inches high, of a beautiful delicate pink colour, turning orange when kept out of the sea water. Its fronds are extremely slender, much and repeatedly branched, the branches somewhat zigzag, spreading in 2 ranks; the ultimate ones level-topped, or, as it were, corymbose. The joints are cylindrical, a little contracted where they meet, about twice or thrice as long as broad. We know nothing of the fructification. It may be expected to resemble that of *C. setacea*, *t.* 1689.

CONFERVA diaphana.

Red-dotted Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Red, capillary, repeatedly forked, divaricated; the ultimate divisions like a pair of forceps. Joints short, pellucid, deep red at each end. Capsules lateral, solitary, globose.

SYN. Conferva diaphana. *Lightf.* 996. *Huds.* 653. *With. v.* 4. 159. *Hull.* 334. *Dillw. Conf. t.* 38. *Dichs. H. Sicc. fasc.* 18. 25.

C. nodulosa. *Huds.* 600.

C. marina nodosa lubrica, ramosissima et elegantissima rubens. *Dill. Musc.* 35. *t.* 7. *f.* 40. *Raii Syn.* 62. *t.* 2. *f.* 3. *Turn. Tr. of L. Soc. v.* 7. 108.

RECEIVED from the Sussex coast, by favour of Miss Biddulph, in November last. It is frequently found in rocky or pebbly basons on the shore, or growing upon the larger marine plants.

Nothing can be more elegant than this species. Its whole stem and branches are finer than hair, repeatedly forked and regularly divaricated, each branch terminating in a pair of short incurved points like pincers. The joints are usually twice as broad as long, but in some branches as much the reverse, pellucid, shining, and almost colourless, except at each end, where the partitions are placed, in which part is a ring of deep red, so that the plant laid on paper looks, as Lightfoot says, like "a branched series of small red dots." The seeds are in lateral, solitary, sessile, globular, red capsules, sparingly produced.

The Dillenian synonym stands on the irrefragable authority of Mr. Turner, nor could any less authority uphold it, because nobody conversant with the usual merit of Dillenius would suppose he could draw so bad a figure, and still less that he could be so partial to what he had done as to repeat it in his edition of Ray. We hence learn however, what Hudson did not discover when he copied Lightfoot's *C. diaphana*, that it is his own *nodulosa*, a species that would seem merely adopted from Dillenius, had not Hudson alone described its fruit.

1743

2443

Polysiphonia

fucoides.

May 1.1809. Published by Jas. Sowerby, London.

CONFERVA fucoides.

Brown Fucus-like Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Brown, capillary, rigid, bushy and much-branched; the ultimate divisions awlshaped, alternate. Joints as broad as long, compound. Capsules lateral, sessile, solitary, globose.

SYN. Conferva fucoides. *Huds.* 603. *With. v.* 4. 141. *Hull.* 334. *Dillw. Conf. t.* 75.

Ceramium violaceum. *Roth. Catal. v.* 1. 150. *t.* 8. *f.* 2.

SENT by Mr. Turner from Yarmouth, and by Miss Biddulph from Southampton, late last autumn. The authority of the name, which could scarcely have been put out of doubt by Hudson's work alone, rests on original specimens in the hands of the Rev. H. Davies and A. Menzies, Esq., as we learn from Mr. Dillwyn, on whom also we rely for the certainty of Dr. Roth's synonym, though the excellent description of the latter leaves less room for hesitation. We do not however find the pellucid dots which he describes on the joints of the main stem and branches.

The whole plant is very bushy, from 3 to 12 inches long, reddish or purplish brown when young, almost black when old or dry, its texture elastic but firm. Frond very much and alternately branched, capillary, jointed throughout, the joints cylindrical, about as broad as long, each consisting of a simple circular series of numerous parallel tubes. See *t.* 1717 and 547. The ultimate branches are awlshaped, all alternate. Capsules lateral, sessile, small, globular, obtuse, discharging their seeds at the summit.

1711
644

Arenaria Pastiginta.

May 1. 1807. Published by Ja.s Sowerby London.

ARENARIA fastigiata.

Level-topped Sandwort.

DECANDRIA Trigynia.

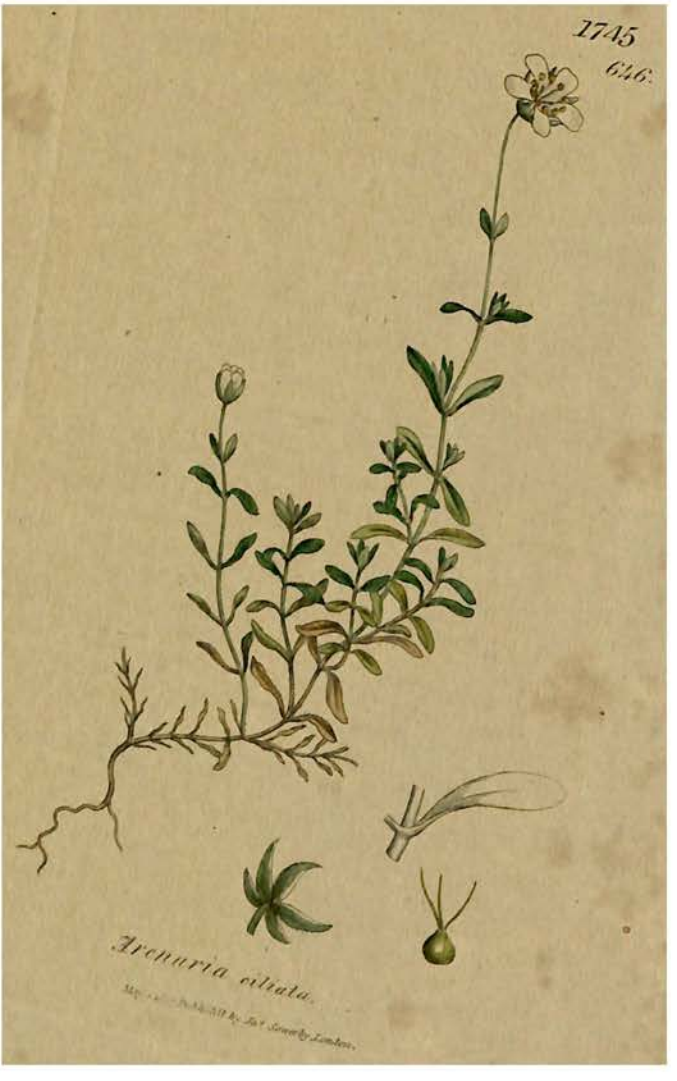
GEN. CHAR. *Cal.* 5-leaved, spreading. *Petals* 5, undivided. *Capsule* superior, of 1 cell, with many seeds.

SPEC. CHAR. Stem erect, straight. Flowers crowded. Leaves awl-shaped. Petals very short. Lateral ribs of the calyx dilated.

SYN. Arenaria fasciculata. *Jacq. Austr. v.* 2. 49. *t.* 182. *Don. Herb. Brit. fasc.* 6. 136.
Stellaria rubra. *Scop. Carn. ed.* 2. *n.* 538. *t.* 17.
Alsine n. 870. *Hall. Hist. v.* 1. 384. *t.* 17. *f.* 2.

MR. GEORGE DON had the good fortune to discover this new British plant on rocks in the mountains of Clova, Angusshire, and also in Fifeshire. He rightly referred it to Jacquin's *A. fasciculata*, not having the means of knowing that the plant of Linnæus and Gouan is a very distinct species, distinguished by the long unequal leaves of its calyx, and other marks, as appears by the authentic Linnæan specimen and Gouan's description. Both plants are very distinct from *Alsine mucronata*. The name we have chosen is peculiarly expressive of the habit of the plant when ripening seed. To account for the seemingly preposterous synonym of Scopoli, it must be observed that he unites *Arenaria* to *Stellaria*, and that the stem of the species before us is often purplish. About Haller's plant there is no question.

Root annual, zigzag, tapering. Stem 1 or more, 4 or 5 inches high, erect, round, leafy, nearly smooth, alternately branched upwards, the branches many-flowered, dichotomous, at length level-topped. Leaves awl-shaped, rigid, very slender, permanent till the stem decays. Calyx-leaves all nearly equal, acute, smooth, green at the keel, with a slender white central rib and a very broad lateral one on each side reaching almost to the margin, an important mark of this species. Petals small, white. Stamens 10, whose antheras have been observed by Mygind to be at first united in pairs. Capsule oblong, of 3 valves. Seeds beautifully toothed, on long stalks. It flowers in June.


1745
646.
Arenaria ciliata.

ARENARIA ciliata.

Fringed Sandwort.

DECANDRIA Trigynia.

GEN. CHAR. *Cal.* 5-leaved, spreading. *Petals* 5, undivided. *Capsule* superior, of 1 cell, with many seeds.

SPEC. CHAR. Stems numerous, much-branched, downy. Flowers terminal, solitary. Leaves spatulate, roughish, fringed at the base. Calyx-leaves with five or seven ribs.

SYN. Arenaria ciliata. *Linn. Sp. Pl.* 608. *Wulf. in Jacq. Coll. v.* 1. 245. *t.* 16. *f.* 2. *Fl. Dan. t.* 346.
Alsine serpilli folio, multicaulis et multiflora. *Segu. Veron. v.* 1. 420. *t.* 5. *f* 2.
A. n. 876. *Hall. Hist. v.* 1. 386. *t.* 17. *f.* 3.

THIS new addition to our Flora was discovered in September 1806 by Mr. J. T. Mackay, on the calcareous cliffs of a high mountain adjoining to Ben Bulben, in the county of Sligo, Ireland. Though found in Iceland, and very abundantly in Switzerland, France, &c., it had never before been seen in the British isles. It is perennial, flowering in autumn.

Root much branched, bearing numerous stems, which are prostrate and repeatedly branched in their lower part, leafy, round, their extremities ascending and most downy. Leaves in pairs crossing each other, recurved, spatulate, obtuse, entire, somewhat fleshy, single-ribbed, more or less rough or hairy, fringed, more particularly towards the base. Flowers erect, on longish, solitary, terminal, simple stalks, clothed with fine white recurved down. Calyx-leaves ovate, acute, concave, hairy, green, with 5 or 7 more or less obscure ribs, and a white membranous edge. Petals obovate, longer than the calyx, of a brilliant white. Stamens 10, all about as long as the corolla. Capsule short, ovate.

In a less luxuriant state this is the *A. multicaulis* of Linnæus. Haller's figure, though far less characteristic than usual with him, and even very faulty in the leaves, represents the plant in this state. The figure in *Fl. Danica* is more like our Irish specimens, but deficient in every peculiar character.

1746
929.

Arabis ciliata.

May 1.1807. Published by Jas Sowerby London

TURRITIS alpina.

Alpine Tower-Mustard.

TETRADYNAMIA Siliculosa.

GEN. CHAR. *Pod* very long, straight, somewhat angular. *Cal.* closed, erect. *Cor.* erect.

SPEC. CHAR. Leaves somewhat toothed, smooth, distantly fringed and bearded; the radical ones obovate; the rest elliptical, half-embracing the stem.

SYN. Turritis alpina. *Linn. Syst. Veg. ed.* 13. 502.
T. hirsutæ varietas. *Fl. Suec.* 236.
T. ciliata. *Willd. Sp. Pl. v.* 3. 544. *Schl. Cat.* 59.
Tourrete ciliée. *Reynier Mem. de la Suisse, v.* 1. 171.

WE are happy to add another new plant to the British Flora, through the kind communications of Mr. J. T. Mackay, who gathered it by the sea-side at Rinville, Cunnamara, in the west of Ireland, in the autumn of 1806. This is the *Turritis alpina* of Linnæus, agreeing with his original Gothland specimens, which he once took for a variety of *T. hirsuta*, but described as a new species in his *Syst. Vegetabilium*. The synonym of Reynier (and consequently of Schleicher and Willdenow) is determined by the very specimen sent to the former by Favrod, and now in my hands, together with the entire collections of both these learned Swiss botanists, the legacy of my lamented friend Davall.

The root seems probably biennial. Stem one or more, from 2 to 12 inches high, simple, erect, leafy, round, smooth. Leaves all smooth on both sides, more or less decidedly toothed, fringed with simple or forked, scattered, spreading hairs, a few of which are often clustered into a little tuft or beard at the tips; the radical leaves obovate, often reddish; the others elliptical, half-clasping the stem. The more evidently the leaves are toothed, the less they seem to be fringed. Flowers white, in a simple *corymbus*, very soon becoming a long cluster of linear, narrow, rugged, obscurely quadrangular, shining pods, each crowned with the very short conical style and capitate stigma.

1747

937.

Nasturtium terrestre.

June 1.1807. Publd. Jul. by Jas. Sowerby London.

SISYMBRIUM terrestre.

Annual Water Rocket.

TETRADYNAMIA Siliquosa.

GEN. CHAR. *Pod* cylindrical, bursting with nearly straight valves. *Cal.* and *Cor.* spreading.

SPEC. CHAR. Pods declining, turgid. Leaves pinnatifid, unequally toothed. Root simply fibrous. Petals scarcely so long as the calyx.

SYN. Sisymbrium terrestre. *Curt. Lond. fasc. 5. t. 49. Sm. Fl. Brit.* 701. *With.* 582. *Hull.* 150. *Relh.* 257. *Sibth.* 207. *Abbot.* 143.
S. amphibium α. *Huds.* 296.
Raphanus aquaticus, foliis in profundas lacinias divisis. *Dill. in Raii Syn.* 301.

GATHERED in Tothill fields last September. It occurs in several other parts of England, in wet places where the soil is gravelly.

Root annual, tapering, sometimes soon dividing into several branches, but not creeping. Stem about a foot high, nearly erect, branched, leafy, furrowed, smooth. Leaves alternate, lyrate, smooth, unequally toothed or somewhat serrated. Flowers numerous, small. Petals shorter than the calyx, sometimes emarginate, yellow. Calyx-leaves concave, obtuse, tinged with red or brown. Nectary of 4 large green glands between the longer and shorter stamens. Stigma capitate, cloven. Fruit in very long cylindrical clusters; the partial stalks alternate, horizontally spreading, each bearing a shortish, corrugated, swelling pod, which grows more upright as it ripens, and is crowned with a very short style. Seeds several.

Linnæus appears not to have been acquainted with this species. Hudson thought it a variety of *S. amphibium*, which has a perennial root, leaves sharply serrated or pinnatifid, larger petals, smaller pods, and a longer style.

1748

955.

Sinapis arvensis.

June 1.1807. Published by Ja.s Sowerby London.

SINAPIS arvensis.

Wild Mustard, or Charlock.

TETRADYNAMIA Siliquosa.

GEN. CHAR. *Cal.* widely spreading. Claws of the *petals* straight. *Nectariferous glands* 4. *Pod* more or less cylindrical, the partition longer than the valves.

SPEC. CHAR. Pods with many angles, rugged, longer than their own two-edged beak. Leaves ovate, somewhat lyrate.

SYN. Sinapis arvensis. *Linn. Sp. Pl.* 933. *Sm. Fl. Brit.* 721. *Huds.* 298. *With.* 594. *Hull.* 148. *Relh.* 262. *Sibth.* 208. *Abbot.* 146. *Curt. Lond. fasc.* 5. *t.* 47.

Rapistrum arvorum. *Raii Syn.* 295.

ONE of the most troublesome of weeds among corn on rather moist land. It is also frequent every where about waste ground and hedges, especially on new banks, the seed being one of those which will lie deep in the ground uninjured for a long course of years, and vegetate whenever it comes within reach of the atmospheric air. It does not so readily grow on a very light dry soil, being more tardy than some other seeds in absorbing moisture sufficient for vegetation. It is annual, flowering in May and June, also occasionally in all open weather.

Root tapering, small, rigid, sometimes a little tuberous. Stem more or less branched, striated, leafy, rough with sharp recurved bristles. Leaves stalked, unequally toothed, rough, ovate, generally somewhat lyrate; the upper ones more simple, sessile, spreading or ascending. Calyx-leaves linear, pale green. Petals bright yellow. Pods upright or a little spreading, with about 8 angles, rugged, mostly rough with deflexed bristles, and each terminating in a sword-shaped, compressed, furrowed beak, not half so long as the pod itself. The seed is used as mustard.

1749

1046

Medicago sativa.

June 1st 1807. Published by Jas. Sowerby Londin.

MEDICAGO sativa.

Purple Medick, or Lucerne.

DIADELPHIA Decandria.

GEN. CHAR. *Pod* compressed, spiral, forcing back the keel of the corolla from the standard.

SPEC. CHAR. Flower-stalks racemose. Pods spirally twisted. Stem erect, smooth.

SYN. Medicago sativa. *Linn. Sp. Pl.* 1096. *Sm. Fl. Brit.* 795. *Huds.* 330. *With.* 658. *Hull.* 165. *Abbot.* 164. *Mart. Rust. t.* 48.

Trifolium Burgundiacum. *Ger. em.* 1189.

THE Cultivated Lucerne is well known as a fodder for cattle, though rather of recent introduction. It is said to have been brought from the more eastern countries into Greece, and has for ages been in general cultivation in the south of Europe. A complete history of the subject is given in Professor Martyn's *Flora Rustica*.

This plant seems to have but little right to a place in our *Flora*, being only a naturalized species, and seldom lasting long in a place. The Rev. Mr. Leathes sent it from Cringleford near Norwich, where he observed it abundantly in hedges, as wild as it ever occurs with us, flowering in July and August.

Root perennial, woody, preferring a calcareous dry soil. Stems nearly erect, about 2 feet high, branched, leafy, roundish, smooth. Leaves alternate, stalked, ternate, oblong inclining to wedge-shaped, acute, serrated in the fore part, smooth above, hairy beneath. Stipulæ acute, sometimes toothed. Clusters axillary, on stalks, erect, many-flowered, with a bristle-like bractea at the base of each partial stalk. Corolla purple, streaked with white and green. Pod spiral, making 2 or 3 turns, rarely more, and containing several seeds. The more spiral pod chiefly distinguishes the plant from *M. falcata, t.* 1016, which after all may be the true wild state of *M. sativa*. Neither culture, however, on the one hand, nor neglect on the other, has hitherto brought them together, so far as we have been able to inquire.

1750

1309.

Urtica dioica

June 25th 1797. Published by Jas. Sowerby, London.

URTICA dioica.

Great Nettle.

MONOECIA Tetrandria.

GEN. CHAR. Male, *Cal.* 4-leaved. *Cor.* none. Rudiment of a *germen* cup-shaped. Female, *Cal.* 2-leaved. *Cor.* none. *Seed* 1, superior, polished.

SPEC. CHAR. Leaves opposite, heart-shaped. Clusters much branched, in pairs, mostly dioecious.

SYN. Urtica dioica. *Linn. Sp. Pl.* 1396. *Sm. Fl. Brit.* 1016. *Huds.* 417. *With.* 201. *Hull.* 210. *Relh.* 375. *Sibth.* 62. *Abbot.* 208. *Curt. Lond. fasc.* 6. *t.* 69.

U. racemifera major perennis. *Raii Syn.* 139.

EVERY body is acquainted with the common perennial Nettle, so abundant in waste places, whether open or shady, blossoming throughout the latter part of summer; but few have perhaps had courage or curiosity enough to investigate parts so strictly guarded, and to perceive that the barren flowers are commonly all from one root, the fertile from another, or, which is still more curious, that both occasionally meet on the same plant, for the more certain preservation of the species.

The roots are perennial and creeping. Stems erect, 3 feet high, leafy, simple, bluntly quadrangular, clothed, like almost every other part of the plant, with stinging bristles. Leaves on stalks, opposite, heart-shaped, pointed, veiny, coarsely serrated. Stipulæ ovate, erect, membranous, smooth. Clusters axillary, in pairs, spreading, much branched; their stalks flat. Calyx of the seed often with 2 additional leaves, or bracteas, which are not always present.

The fibres of the stem may be manufactured like hemp, a plant nearly allied to this in botanical affinity.

Urceolaria cinerea.

Drawn & Lithog. Published by Jas. Sowerby London.

LICHEN cinereus.

Grey Hollow-shielded Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust grey, rugged and cracked, with a broad, greenish, undulated border. Shields immersed, solitary or clustered, slightly concave, black, with an elevated entire margin, of the substance of the crust.

SYN. Lichen cinereus. *Ach. Prod.* 32. *Linn. Mant.* 132. but not *Engl. Bot. t.* 820.
Urceolaria cinerea. *Ach. Meth.* 143.

THE most common of all Lichens, according to Mr. Borrer, both on the downs and on the sea-shore of Sussex, growing on loose exposed flints. Whether it may have been confounded with *ater*, or with any thing else, or whether it may have passed unnoticed by British botanists, we have no certain information. We are certain of Dr. Acharius's name, and he is our only authority for the reference to Linnæus. What we have called *cinereus*, in *t.* 820, must retain the name of *multipunctus*, originally given by Hoffmann. The *L. multipunctus* of Ehrhart I had previously published in *Tr. of Linn. Soc. v.* 1, as *encaustus*, by which name it is distinguished in the works of Acharius.

The Lichen before us is nearly allied to our *fibrosus*, *t.* 1732, and *tuberculosus*, *t.* 1733, but is not fibrous, neither is it regularly tessellated, but rather swelling into roundish irregular knobs, and at length cracked. Its colour is grey; the substance thin and hard. Towards the margin it is obscurely radiated, and the very edge is dilated, undulated, dark-greenish, and somewhat polished. Shields small, elevated, clustered or solitary, black, slightly concave, with an elevated, smooth, entire border, of the substance of the crust.

1752.

1968

Pelusaria crassa.

Sowerby del. et lith. Published by the Proprietor, London.

LICHEN obscurus.

Dull-olive Dotted Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.

Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust uninterrupted, undulated, olive-brown, smooth, black-edged. Tubercles deeply immersed, minute, clustered, dark-brown, oblong, curved.

SYN. Lichen obscurus. *Ach. Prod.* 20.

Opegrapha obscura. *Ach. Meth.* 22. *Persoon in Ust. Ann. fasc.* 7. 32. *t.* 3. *f.* 5, B, b.

SENT us from the New Forest, Hants, by Mr. Lyell. We have also received it from Edward Rudge, Esq., F. L. S., the celebrated author of the *Plantæ Guianenses*, and from our often-mentioned friends Messieurs Turner and W. Borrer.

It grows on the bark of old trees, forming dull-olive, continued, irregular spots, turning greyish with age, undulating with the inequalities of the bark, but otherwise even in thickness, smooth, not mealy, internally green. The minute fructifications, of a dark brown, are in little oblong specks, not prominent, crowded together, divaricated so as to seem branched. A perpendicular section of the crust shows the real fruit to be deeply imbedded, and much larger within than appears outwardly.—This species does not properly belong to *Opegrapha*, but to a new Acharian genus named *Arthonia*, along with *L. impolitus*, *t.* 981.

1753.
1918

Opegrapha atra

Sowerby Del. et Lith. Pubd. 1st May 1918 by Jas. Sowerby & Co. London.

OPEGRAPHA denigrata.

Black Opegrapha.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* in black, linear, sessile, simple or branched, bordered *clefts*, in an uninterrupted crust.

SPEC. CHAR. Crust very thin, membranous, smooth, white. Clefts slightly prominent, coal black, smooth, crowded, wavy, simple or divided.

SYN. Opegrapha denigrata. *Ach. Meth.* 27.
O. atra. *Persoon in Ust. Ann. fasc.* 7. 30. *t.* 1. *f.* 2, C, c.
Lichen denigratus. *Ach. Prod.* 24.

WE have been backward in adopting most of the genera into which the learned Professor Acharius has divided the great family of *Lichen*, because we knew his studies to be progressive, and that he had not yet accomplished all his designs. The genus of *Opegrapha* however, named and characterized by Humboldt and Persoon, and consisting of numerous species, confounded by Linnæus under his *Lichen scriptus*, is so clearly distinct that we cannot hesitate to admit it. Adanson indeed had previously called it *Grafis*, in the same work in which he made a strange genus of Dillenius's *Sphagnum* 3, 4, 10—13, and called it *Green*, in defiance of all Greek and Latin nomenclature: but such whimsical writers, whether they happen to be occasionally right or wrong, neither deserve nor receive any attention, because their perverse changes and contrarieties, if listened to, would give more trouble than any of their discoveries could compensate; and it is always to be suspected that truth is not their primary object; which is notorious with regard to Adanson.

The present species grows on the smoothest bark of trees. Its very thin, greenish-white, smooth crust forms roundish patches, inseparable from the bark. The lines or clefts of fructification are peculiarly black, crowded, somewhat parallel, undulating, simple or branched, a little prominent, and but slightly sunk into the crust, which does not rise into a border at their sides.

1754
1927

Opegrapha scripta.

James Sowerby Published by Jas. Sowerby London.

OPEGRAPHA pulverulenta.

Powdery Opegrapha.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* in black, linear, sessile, simple or branched, bordered *clefts*, in an uninterrupted crust.

SPEC. CHAR. Crust expanded, smoothish, membranous, white. Clefts immersed, powdery, zigzag, branched and confluent, with an elevated border from the crust.

SYN. Opegrapha pulverulenta. *Persoon in Ust. Ann. fasc.* 7. 29. *t.* 1. *f.* 2, B, b. *Ach. Meth.* 28.

L. scriptus, var. *Ach. Prod.* 25. *Hoffm. Enum. t.* 3. *f.* 2, a, b.

NOT uncommon upon trees. We are obliged to Mr. Turner for well-authenticated specimens, not having ourselves received this species from Professor Acharius, or at least only its large variety ε.

The crust is of the same colour with that of *O. denigrata*, *t.* 1753, but more spreading and undefined, thicker and more uneven, rising up into a spurious border to the fructification. The clefts are deeply immersed, zigzag, more or less branched, divaricated and confluent, pointed at the extremities; their disk powdery and whitish, which is the origin of the specific name.

Most probably *tab.* 18. *f.* 1. of Dillenius might be drawn from a specimen of this species; but we have not received any information upon the subject, nor have we visited his herbarium at Oxford since the subject of this genus came under our consideration.

1755

June 1.1807 Published by Jas Sowerby London

OPEGRAPHA serpentina.

Serpentine Opegrapha.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* in black, linear, sessile, simple or branched, bordered *clefts*, in an uninterrupted crust.

SPEC. CHAR. Crust leprous, tartareous, uneven, whitish. Clefts immersed, crowded, somewhat powdery, zigzag, simple and branched, with an elevated border from the crust.

SYN. Opegrapha serpentina. *Ach. Meth.* 29. *Schrad. Journ. ann.* 1801. *fasc.* 1. 79.
Lichen serpentinus. *Ach. Prod.* 25.

SENT from Yarmouth by Mr. Turner, who is by no means convinced of its being permanently distinct from *O. pulverulenta*. Acharius rests the character of the present species on its thicker and tartarcous crust; but we know this circumstance to be variable in some Lichens, as *subfuscus*; and Mr. Turner has traced intermediate varieties between the crusts of these two *Opegraphæ*. A difference in the habit of the fructification is also mentioned, and perhaps not without foundation, but the clefts of *O. pulverulenta* are extremely variable. In this they are more frequently unbranched, and more irregularly sprinkled over the crust. We beg leave to remark that the arrangement of these organs, and their more or less parallel position, are much affected by the mode of extension of the bark. Nevertheless, as *O. serpentina* has been deliberately kept distinct by such first-rate cryptogamists as Acharius and Schrader, we have thought best to publish a figure of it, being the first that has appeared.

1756
1929

Opegrapha dendritica.

James Sowerby, Published by Jas.ᵗ Sowerby, London.

OPEGRAPHA dendritica.

Tree-like Opegrapha.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* in black, linear, sessile, simple or branched, bordered *clefts*, in an uninterrupted crust.

SPEC. CHAR. Crust tartareous, determined, very white and somewhat powdery. Clefts immersed, depressed, without any elevated border, repeatedly branched, zigzag, tapering at each end.

SYN. Opegrapha dendritica. *Ach. Meth.* 31. *t.* 1. *f.* 10.

RESPECTING this beautiful species there is no doubt nor difficulty. It has been found in Sussex by Mr. W. Borrer, and in the New Forest by Mr. Lyell. Acharius only has described it, from Spanish specimens, with an indifferent figure.

It grows on the smooth bark of trees, in roundish, cream-coloured, somewhat mealy, patches; the crust thin but tartareous, spreading in a determinate manner, all the clefts radiating as it were from the centre, and not extending to the edge, which, for some distance, is smooth, uniform, and spotless. It should seem as if the fructifying clefts were formed by a shrinking in the central part of the crust, or as if that part could not keep pace in dilatation with the marginal region, and were over-stretched. Our figure expresses this better than it can be done by words. The clefts are black, sunk below the surface of the crust, and destitute of any margin, except an occasional slight elevation of the crust, the proper black border, usual in the genus, being scarcely perceptible. Their form is waving, tapering very acutely at each end, branched and forked in a most elegant manner, those furthest from the centre being the most complicated.

1757

2198

Collema granulatum?

June 2.1807. Published by Jas Sowerby, London.

LICHEN granulatus.

Granulated Gelatinous Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Leafy, gelatinous, fleshy, granulated on both sides, of a blackish olive colour; its lobes crowded, rounded, plaited, crisped and cut. Shields scattered, dark brown.

SYN. Lichen granulatus. *Huds.* 536. *With. v.* 4. 73. *Hull.* 300. *Relh.* 462. *Sibth.* 327.
L. furvus. *Ach. Prod.* 132.
Lichenoides gelatinosum atro-virens, auriculàtum et granosum. *Dill. Musc.* 140. *t.* 19. *f.* 24.
Parmelia furva. *Ach. Meth.* 230.

DILLENIUS found this on gravel walks at Oxford, but never saw the shields, which are very rare. Mr. W. Borrer has sent us specimens from Sussex in fructification, which agree with mine from Kirkby Lonsdale, and with the *furvus* sent by Acharius. We feel ourselves obliged to retain the original and most excellent name, given by Hudson, as the younger Linnæus in his *Supplementum* merely adopted it from English writers, and mistook for it, as we learn from Professor Acharius, a variety of *L. crispus*. The Swedish *L. granulatus* therefore falls to the ground, and the *furvus* becomes a synonym of ours.

It is not easy in description to distinguish this from *L. flaccidus*, *t.* 1653, and yet they are very distinct.

The present is much smaller, and of a more olive, or yellowish, hue when wet, though almost black when dry. It creeps on the ground, and is scarcely visible but in moist weather. The substance is more thick, fleshy and rigid. Lobes crowded, plaited and cut, clothed with regular globular pellucid grains on both sides. Shields scattered, sessile, flat or slightly concave, dark brown, at length black, with an entire margin.

Halyseris
polypodioides

FUCUS membranaceus.

Pellucid Fucus.

CRYPTOGAMIA Algæ.

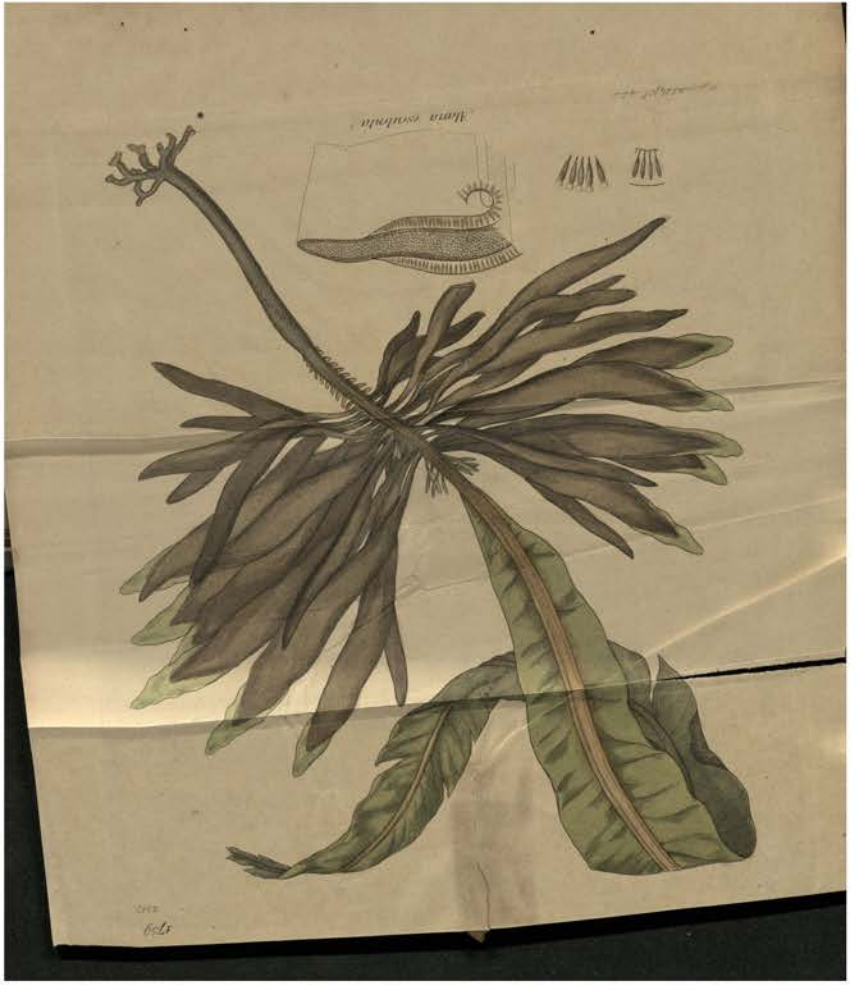
GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond linear, forked, membranous, pellucid, greenish brown. Mid-rib slightly prominent, here and there proliferous. Fruit in convex superficial dots.

SYN. Fucus membranaceus. *Stackh. Nereis*, 13. *t.* 6. *Turn. Syn.* 141. *With. v.* 4. 93. *Hull.* 328.

SENT from the Scottish coast by our kind friend James Brodie, Esq. Mr. Stackhouse found it at Sidmouth, Devonshire, and his description is the first that ever appeared.

Several fronds, 6 or 8 inches high, arise from a small callous root. They are light greenish brown, forked, very thin and membranous, undulated, often torn; furnished with a strong central midrib, which is slightly prominent, and here and there proliferous: the extremities are somewhat rounded. The fructification is scattered over the frond in small roundish convex dots, the capsules or tubercles crowded, obovate, and often accompanied by what seems the rudiment of a *Conferva*, as described by Mr. Stackhouse, and first ascertained by the accurate Mr. Woodward.



FUCUS esculentus.

Eatable Winged Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond simple, undivided, lanceolate, stalked, with a prominent mid-rib. Stalk winged with numerous, oblong, ribless leaflets; the uppermost covered with fructification.

SYN. Fucus esculentus. *Linn. Mant.* 135. *Huds.* 578. *With. v.* 4. 93. *Lightf.* 938. *t.* 28. *Turn. Syn.* 104.

F. tetragonus & teres. *Gooden. and Woodw. Tr. of L. Soc. v.* 3. 140. *Hull.* 318.

F. fimbriatus. *Gmel. Fuci*, 200. *t.* 29. *f.* 1, imperfect.

F. scoticus latissimus edulis dulcis. *Raii Syn.* 46.

THIS remarkable Fucus has long been known on the Scottish coast, where it is, according to Lightfoot, called Badderlocks, and the stalk is eaten both by men and cattle, being esteemed wholesome to the stomach. Its season is said to be September, but our specimens in fructification, which no botanist has yet seen, were sent by Mr. Brodie early this spring, 1807. The plant occurs also on the coasts of Cornwall, Anglesea, &c.

Root of thick radiating fibres, not much branched. Whole plant of an olive brown, or greenish, from a few inches to 10 feet in length. Stalk simple, cylindrical, terminating in a simple, lanceolate, undulated leaf, with a strong mid-rib, occasionally cylindrical or square, for we cannot but concur with Mr. Turner in believing these differences to be mere varieties. The upper part of the stalk, when at maturity, is winged with crowded, more or less numerous, oblong, ribless leaflets, in which Mr. Turner with his usual acuteness presumed the fructification might be found. My young friend Mr. J. D. Sowerby, by his own observation alone, detected it there, spreading over great part of both sides of the upper leaflets, in the form of a wide-extended swelling, in which the tubercles of seeds are perpendicularly imbedded.

FUCUS bulbosus.

Great Furbelowed Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond palmate, ribless; its segments sword-shaped. Stalk flat, with a dilated, folded, undulated border, lodging the fructification.

SYN. Fucus bulbosus. *Huds.* 579. *Gooden. and Woodw. Tr. of L. Soc. v.* 3. 153. *Turn. Syn.* 212. *Hull.* 320.

F. polyschides. *Lightf.* 936. *With. v.* 4. 97. *Stackh. Ner.* 6. *t.* 4.

F. palmatus. *Gmel. Fuci,* 202. *t.* 30.

SENT from Scotland by Mr. Brodie, along with *F. esculentus,* and the same highly interesting discovery of the fructification has been made by Mr. J. D. Sowerby, in this species as in that.

This is the largest of the British *Fuci,* being sometimes as much as a man can carry. It is found on the western coasts of England, as well as on the southern ones. The root consists of innumerable thick fibres, soon assuming a bulbous form at their common origin, whence arises one, two or three broad flat stalks, singularly bordered in the lower part, at each edge, with a folded undulated expansion, above which the stalk becomes simple and linear, dividing afterwards into numerous, oblong or swordshaped, acute, entire segments, occasionally subdivided, always destitute of ribs or veins, very smooth, even so as to appear varnished, according to Mr. Turner, and of a leathery texture. The colour is a dark olive brown, more reddish about the stalk and its furbelows. On both sides of the latter the fructification, hitherto unobserved, is lodged in prominent patches, within whose substance, but quite distinct from the frond, the tubercles of seeds are ranged vertically, as in *F. esculentus.*

1761
2506

Diatoma flocculosum?

CONFERVA flocculosa.

Disjointed Fresh-water Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

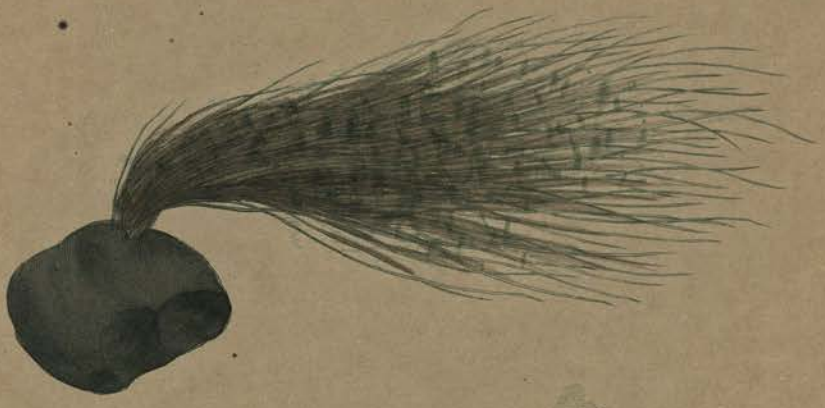
SPEC. CHAR. Green. Filaments capillary, mostly simple, compressed. Joints quadrangular, transversely striated; at length separating at their alternate edges, and divaricated.

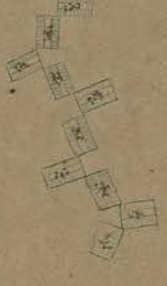
SYN. Conferva flocculosa. *Roth. Catal. v.* 1. 192. *t.* 4. *f.* 4. *and t.* 5. *f.* 6. *Dillw. Conf. t.* 28.

FIRST discovered in England by Mr. Dillwyn and Mr. Joseph Woods junior, growing on decayed vegetables in a pool on Hampstead heath. We have received specimens from Norfolk by favour of Mr. Turner.

Well might its original discoverers mistrust their own eyes when they saw the wonderful structure of this plant. It forms light-green or brownish tufts about a quarter of an inch high, consisting of dense filaments, scarcely, if at all, branched, as fine as a human hair, compressed, at length separating at one of their edges only, (the other continuing attached to its neighbouring joint), so that the joints become divaricated in an alternate order. They are transversely and regularly striated, and marked besides with a central, colourless, pellucid, longitudinal line. Each joint is commonly about as broad as long. Of the fructification nothing is known.

1762





Sibbald Lithog. Published by Jos. Jones 69 London.

CONFERVA Biddulphiana.

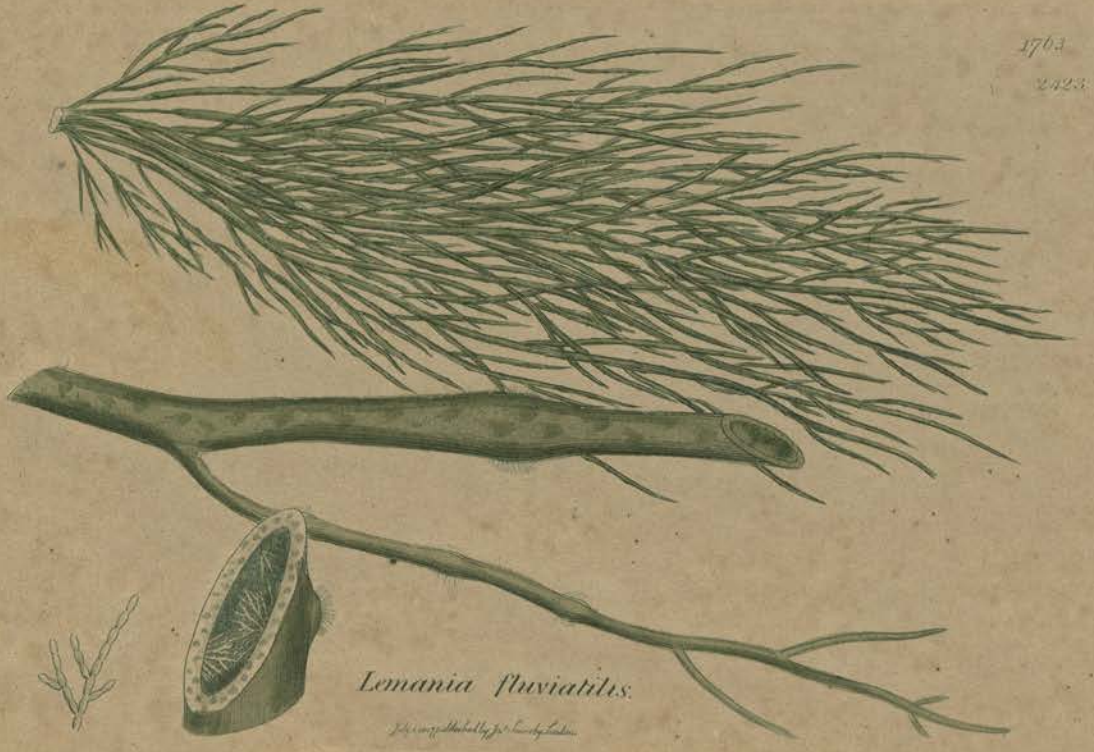
Disjointed Marine Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Pale green. Filaments capillary, simple, somewhat compressed. Joints quadrangular, longitudinally striated; at length separating at one of their edges and divaricated.

THIS curious plant, of which we can find no description, was found by Miss Susanna Biddulph in November and December last at Southampton, entangled with every marine production of the season. It serves to illustrate and confirm the nature of the *C. flocculosa* in our last plate. Its filaments are about half an inch long, nearly 3 times as thick as those of the last mentioned, and less compressed. The joints do not separate quite so regularly in an alternate manner, and moreover differ remarkably in being crenate where they join, as well as striated or furrowed longitudinally, not transversely; while their central line is transverse, bearing an apparent mass of reddish seeds. Our plate contains exact copies of chosen specimens, which will explain, better than can be done in words, the nature of so extraordinary a production.


1703
2423
Lemania fluviatilis.

CONFERVA fluviatilis.

Horse-tail Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Dull green. Filaments repeatedly and alternately branched, somewhat rigid, tapering at each end, regularly swelling at intervals, hollow, without any internal partitions.

SYN. Conferva fluviatilis. *Linn. Sp. Pl.* 1635. *Huds.* 597. *With. v.* 4. 134. *Hull.* 332. *Lightf.* 985. *Dillw. Conf. t.* 29. *Roth. Catal. v.* 1. 201. *Dicks. H. Sicc. fasc.* 17. 25.

C. fluviatilis lubrica setosa, equiseti facie. *Dill. Musc.* 39. *t.* 7. *f.* 47.

β. C. torulosa. *Roth. Catal. v.* 1. 200.

C. fluviatilis nodosa, fucum æmulans. *Dill. Musc.* 39. *t.* 7. *f.* 48.

FOUND in clear rapid streams, and therefore more especially in mountainous countries. Mr. W. Borrer sent it from the Winter-bourne, a rapid rivulet at Lewes, Sussex, in April last.

Several stems, 4 to 6 inches long, grow horizontally from one callous root which attaches itself to rocks or pebbles. The colour of the whole plant is a dull semipellucid green. Each stem, or filament, is more or less branched, tapering toward each extremity, solid for a small distance above the base, but otherwise tubular throughout, formed of a very cellular coat, and, as far as we have observed, uninterrupted by any internal transverse partitions. Mr. Borrer has detected tufts of fine branched jointed divaricating fibres, lining the inside of the tube, and greatly similar to what have been described by previous writers as scattered over the outside, especially at the swellings regularly distributed along the fibres, which give the plant an appearance of being jointed.

Sowerby Published by Jas. Sowerby London

CONFERVA polymorpha.

Black Tufted Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Brownish black. Filaments very much branched, level-topped, somewhat cartilaginous. Joints broader than long, pervaded by a central jointed filament. Capsules ovate, solitary, sessile, towards the summits of the branches.

SYN. Conferva polymorpha. *Linn. Sp. Pl.* 1636. *Huds.* 599. *With. v.* 4. 138. *Hull.* 333. *Lightf.* 989. *Relh.* 484. *Dillw. Conf. t.* 44. *Fl. Dan. t.* 395.

C. marina geniculata nigra palmata. *Dill. Musc.* 32. *t.* 6. *f.* 35.

C. marina geniculata ramosissima lubrica, brevibus et palmatim congestis ramulis. *Dill. in Raii Syn.* 61.

Ceramium fastigiatum. *Roth. Catal. v.* 2. 175.

Fucus lanosus. *Linn. Syst. Veg. ed.* 13. 815. *Herb. Linn.*

VERY frequent in the sea, and mouths of rivers, growing parasitically on the large coriaceous *Fuci*, especially *F. nodosus*, *t.* 570, on which it forms dense blackish tufts, 2 or 3 inches high, composed of innumerable tough capillary filaments, very much subdivided, making a level surface at the top like a corymbus. These filaments are thickly jointed, the joints being broader than long, each composed of an internal annular series of interrupted cells, the whole pervaded by a central jointed and knobbed filament, first discovered by Mr. J. D. Sowerby. These central knobs are sometimes swelled, and apparently diseased, when they seem to become what Lightfoot took for "pairs of male conic catkins." The capsules are sessile, solitary, lateral, towards the tops of the branches, of an ovate form.

The genus *Ceramium* was first founded, under the name of *Ceramianthemum*, by Donati, in his *Storia Naturale Marino del Adriatico*, 25. *t.* 1, and is surely distinct from the fresh-water *Confervæ*, as the learned Dr. Roth has judged; but its character now combines plants as little akin to each other. It is much to be wished that the compound-jointed *Confervæ* could be separated from the rest.

Vaucheria sessilis

VAUCHERIA sessilis.

Sessile-fruited Vaucheria.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Anthera* awlshaped, incurved. *Capsules* adjoining to the *anthera*, ovate, single-seeded, in pairs or solitary.

SPEC. CHAR. Capsules in pairs and solitary, sessile on each side of the anthera.

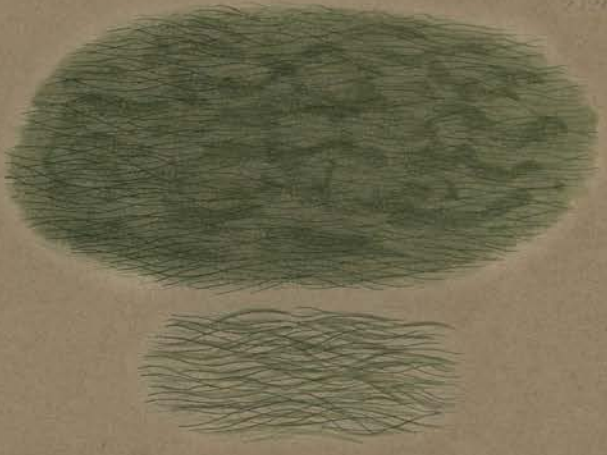
SYN. Ectosperma sessilis. *Vaucher Conf.* 31. *t.* 2. *f.* 7.
Conferva vesicata. *Dillw. Conf. t.* 74; without the anthera.
Ceramium cæspitosum. *Roth. Catal. v.* 3. 120.

OF the ingenious work of M. Vaucher upon fresh-water Confervas we have already spoken, p. 1654, 1655, &c. He is the first botanist who ascertained the true fructification and mode of propagation of the genus before us, called by him *Ectosperma*, a name which has justly given place to that of *Vaucheria*, chosen previously* by the learned French botanist M. Decandolle for this genus, and under which, I am told, it has recently appeared in his *Flore Française*. It consists of several species, distinguished by M. Vaucher according to the situation, insertion, and form of their capsules and anthera, and we rely on his accuracy, notwithstanding the weighty opinion of Dr. Roth, who joins them all together as a species of *Ceramium*, to which genus, if itself founded in nature, they can have no affinity, nor do they agree in generic character. We conceive *Vaucheria* to be one of the genera that, in our present state of knowledge, can with most safety be separated from *Conferva*.

We received our fresh specimens in February 1807, from Sussex, by favour of Mr. Borrer. The plant covers the surfaces of pools in broad green patches, and consists of capillary, branched, smooth, rather elastic, tubular filaments, filled with a green pulpy substance, which often separates in masses, and gives the filament a jointed appearance. Capsules sessile, commonly in pairs, ovate, each containing one large green seed, and having between them one awlshaped body, at length recurved, asserted by M. Vaucher to be the anthera. Young plants, germinating from the seeds, are represented at the lower part of our plate. Vesicles, of the nature of galls perhaps, inhabited by Muller's *Cyclops Lupula*, are often found on the branches, see *a*, *a*, with a dark-coloured animal besides.

* See *Vaucher*, 25.

1760



Vaucheria geminata

VAUCHERIA geminata.

Twin-stalked Vaucheria.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Anthera* awlshaped, incurved. *Capsules* adjoining to the *anthera*, ovate, single-seeded, in pairs or solitary.

SPEC. CHAR. Capsules in pairs and solitary, on opposite partial stalks, growing out of one common stalk with the anthera.

SYN. Ectosperma geminata. *Vaucher Conf.* 29. *t.* 2. *f.* 5.

FOUND with the preceding in Sussex, and sent by Mr. W. Borrer. We believe indeed that neither species is rare; but this gentleman has first in England verified the observations of M. Vaucher concerning both.

No specific distinction can be found between the filaments of this and *V. sessilis*, but the fructification is surely distinct enough to form a character. One common stalk bears both organs. The anthera is terminal. The capsules grow on opposite partial stalks, and in one instance Mr. J. D. Sowerby has met with 2 pairs of them, one above another. Sometimes, on the contrary, there is only one capsule to an anthera, as in the former species.

The dark-coloured animal, mentioned in the last page, is common on both species, as well as the *Cyclops Lupula*. Is the former the parent animal, and are the small pale ones its young progeny?

M. Vaucher refers to this genus our *Conferva velutina*, *t.* 1556, of which Micheli has first imperfectly observed the capsules. See *Mich. Gen. t.* 89. *f.* 5, G.

1767

446

Peucedanum officinale.

July 1 1787 Published by Jas. Sowerby, London

PEUCEDANUM officinale.

Sea Sulphur-wort.

PENTANDRIA Digynia.

GEN. CHAR. *Fruit* ovate, compressed, striated on both sides, encompassed with a border. *Cal.* of 5 teeth. *General Involucrum* very short. *Flowers* of the disk abortive.

SPEC. CHAR. Leaves five times deeply three-cleft; leaflets linear, undivided.

SYN. Peucedanum officinale. *Linn. Sp. Pl.* 353. *Sm. Fl. Brit.* 304. *Huds.* 116. *With.* 294. *Hull.* 60.
Peucedanum. *Raii Syn.* 206.

ONE of our rarest umbelliferous plants, found in salt marshes and ditches, chiefly in the south-east quarter of the kingdom. Our specimen was obligingly communicated by Mr. Crow of Feversham, who gathered it at Hearn, 6 miles from Whitstable, on a cliff by the sea-side, in full flower September 22d 1806, when it was already out of flower by the river side below Feversham; in which last place it grew in Sherard's time, and was also observed by Mr. Lightfoot in 1775.

The whole plant is smooth, and has a strong sulphureous smell, especially the root, which is perennial, tap-shaped, very resinous and fœtid, and reported to be useful in coughs, in obstructions of the viscera, and in nervous disorders. Its powers, whatever they may be, are certainly of no feeble kind; but they should be cautiously explored. Stem near a yard high, erect, round, striated, branched, leafy, tough. Leaves narrow and rigid, divided 5 or 6 times successively into 3 deep divisions, the ultimate lobes flattish, linear, acute, entire. Umbels large, of a great number of rays, concave. General involucrum of a few short bristle-shaped leaves; partial of several still narrower ones, about half as long as the partial rays, which are quite capillary, but rigid. Petals yellow, equal, incurved. Calyx-teeth acute, inflexed. Styles recurved. Fruit tawny, broad, flat, furrowed on each side.

1763.
962.

Erodium cicutarium.

Published by Jas. Sowerby, London

ERODIUM cicutarium.
Hemlock Stork's-bill.

MONADELPHIA Pentandria.

GEN. CHAR. *Cal.* 5-leaved. *Petals* 5. *Honey-glands* 5. *Barren filaments* 5. *Fruit* beaked, separating into 5 capsules, each tipped with a long spiral awn, bearded on the inside.

SPEC. CHAR. Flower-stalks many-flowered. Leaves pinnate; leaflets sessile, pinnatifid and cut.

SYN. Erodium cicutarium. *L'Herit. in Ait. H. Kew. v.* 2. 414. *Sm. Fl. Brit.* 727. *Relh.* 266. *Sibth.* 211. *Abbot.* 147.

Geranium cicutarium. *Linn. Sp. Pl.* 951. *Huds.* 300. *With.* 609. *Hull.* 154. *Curt. Lond. fasc.* 1. *t.* 51.

G. cicutæ folio inodorum. *Raii Syn.* 357.

β. G. inodorum album. *Raii Syn.* 357.

γ. G. pimpinellæ folio. *Dill. in Raii Syn.* 358.

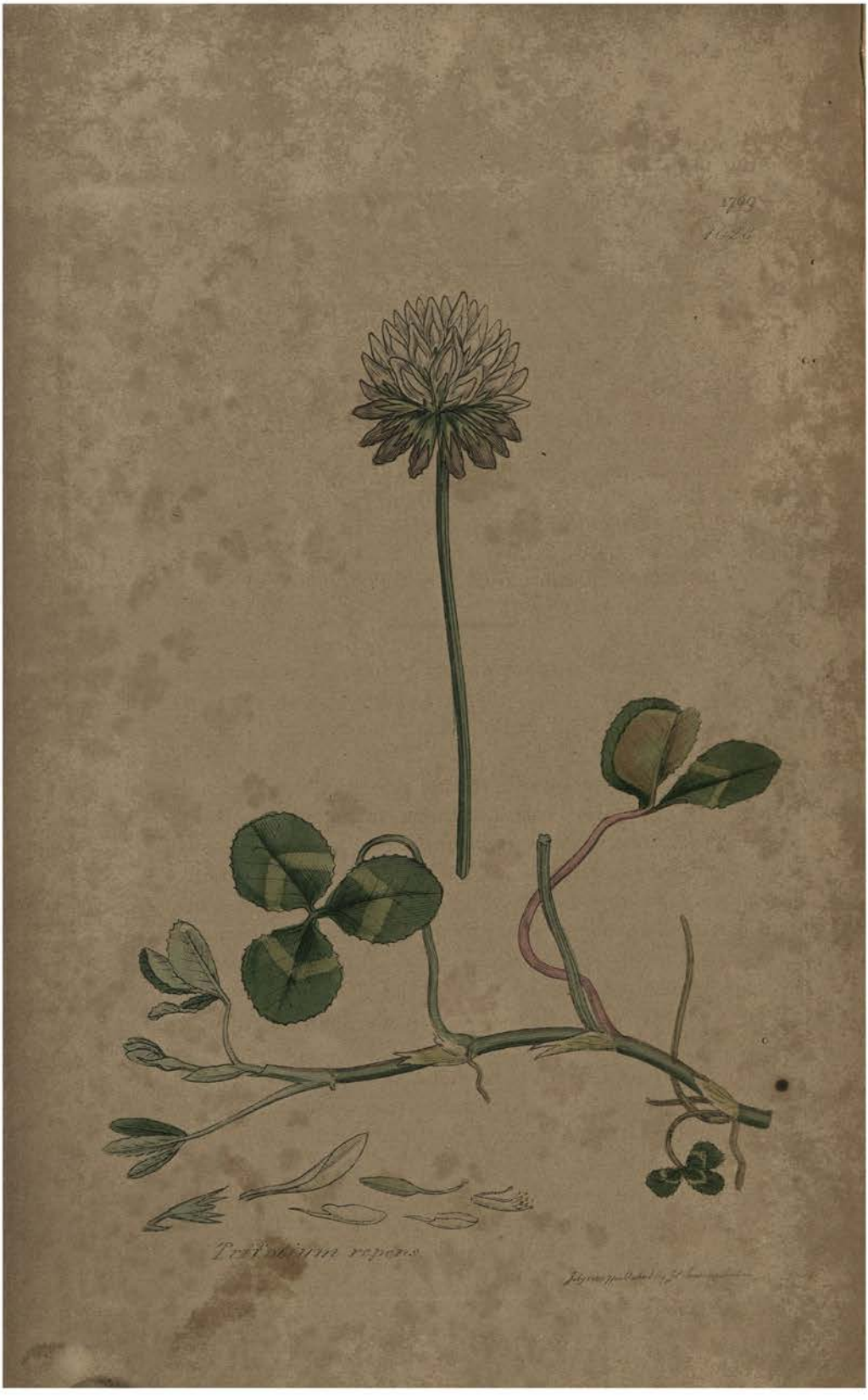
Erodium pimpinellæfolium. *Sibth.* 211.

FREQUENT in waste ground, especially on a sandy soil, flowering from June to August or September.

Root annual, tap-shaped, whitish. Stems various in number and luxuriance, procumbent, spreading, mostly branched, leafy, somewhat angular, hairy. Leaves alternate towards the root; often opposite from luxuriance near the extremity of each branch; pinnated; the leaflets mostly alternate, sessile, pinnatifid, acutely cut, hairy. Stipulas in pairs, ovate, acute, membranous. Flower-stalks opposite to the leaves when the latter are alternate, otherwise axillary, elongated, each bearing an umbel of several pretty rose-coloured flowers, white in variety β. Stamens simple. Capsules inversely conical, vertical, single-seeded, bristly with reflexed hairs.

The variety γ, reckoned by some a distinct species, has 2 or 3 of its petals elegantly marked with a green depression near the base; but we have found that circumstance very variable, and occurring chiefly by the sea, or else in chalky ground. Some years it abounds in places where only the common kind, with here and there a green spot, will be found the next season.

E. cicutarium can scarcely be called "inodorous," but its leaves have not the musky scent of *E. moschatum*, *t.* 902.


1799
Trifolium repens

TRIFOLIUM repens.

White Trefoil, or Dutch Clover.

DIADELPHIA Decandria.

GEN. CHAR. *Flowers* more or less capitate. *Pod* scarcely longer than the calyx, never bursting, but falling off entire.

SPEC. CHAR. Heads umbellate. Pods with four seeds. Stem creeping.

SYN. Trifolium repens. *Linn. Sp. Pl.* 1080. *Sm. Fl. Brit.* 782. *Huds.* 324. *With.* 646. *Hull.* 163. *Relh.* 286. *Sibth.* 228. *Abbot.* 161. *Curt. Lond. fasc.* 3. *t.* 46. *Mart. Rust. t.* 34.

T. pratense album. *Raii Syn.* 327.

VERY common in meadows and pastures, flowering from May to September, and varying excessively with regard to luxuriance, as well as in the white or dark purplish marks upon its leaves.

Root fibrous, perennial. Stems prostrate, creeping very extensively, branched near their origin, round, smooth, leafy. Leaves alternate, on long upright stalks. Leaflets on small partial stalks, inversely heart-shaped, or roundish, finely toothed, smooth. Flower-stalks longer than the leaves, angular, each bearing a dense round-headed umbel, of many cream-coloured flowers, rarely reddish, pendulous in decay. Calyx smooth, with 10 ribs. Pod oblong, smooth, containing 3 or 4 seeds, and invested with the brown permanent corolla.

In rich moist soil, in osier-holts, &c., it sometimes acquires a more upright and luxuriant stem, but still remains distinct from the Linnæan *T. hybridum*, with which some have confounded it.

This plant is valuable for supplying cattle with fodder in the dry autumnal months, and forms, as Professor Martyn observes, an excellent bottom in pastures.

Trifolium pratense.

J. Sowerby published by Jas. Sowerby London.

TRIFOLIUM pratense.

Common Purple Clover, or Honeysuckle Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Flowers* more or less capitate. *Pod* scarcely longer than the calyx, never bursting, but falling off entire.

SPEC. CHAR. Spikes dense. Stems ascending. Parts of the corolla unequal in length. Four of the calyx-teeth equal. Stipulas awned.

SYN. Trifolium pratense. *Linn. Sp. Pl.* 1082. *Sm. Fl. Brit.* 785. *Huds.* 325. *With.* 651. *Hull.* 163. *Relh.* 287. *Sibth.* 228. *Abbot.* 162. *Afzel. in Tr. of L. Soc. v.* 1. 240.

T. pratense purpureum. *Raii Syn.* 328.

β. T. pratense. *Mart. Rust. t.* 3. *Fl. Dan. t.* 989.

T. purpureum majus sativum, pratensi simile. *Raii Syn.* 328.

γ. With a white flower. *With.* 652.

δ. Trifolium pratense purpureum minus, foliis cordatis. *Dill. in Raii Syn.* 328. *t.* 13. *f.* 1.

WE have been careful to procure a genuine wild specimen of this plant from the calcareous hills above Matlock bath, where it appears to be truly perennial, flowering about the end of June. Professor Martyn observes that it seldom lasts more than 2 years in a cultivated state. This may probably be for want of a fit soil or situation, as is the case likewise with Saintfoin, a truly perennial plant on its native chalky downs.

Root tapering, branched, but not creeping. Stems ascending, about a foot high, slightly branched, downy in the upper part, leafy. Leaflets elliptical, more or less acute, entire, smoothish, with a pale lunate spot. The uppermost leaves are mostly opposite. Stipulas awned, ovate, broadish, united, pale with purple ribs interbranching near the edge. Spikes terminal, solitary, sessile, ovate, dense, of many fragrant, light purple, flowers, whose petals are united at the base, and even combined with the filaments. Calyx hairy, with 10 ribs, 4 equal teeth, and 1, the lowermost, longer than the rest.

The value of this plant as an *artificial grass* is well known to agriculturists, especially in Norfolk.

1771

1097.

Hieracium umbellatum

And 1st. 1797 Published by Jas Sowerby London

HIERACIUM umbellatum.

Narrow-leaved Hawkweed.

SYNGENESIA Polygamia-æqualis.

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Stem erect, somewhat umbellate. Leaves linear, scattered, slightly toothed.

SYN. Hieracium umbellatum. *Linn. Sp. Pl.* 1131. *Sm. Fl. Brit.* 835. *Huds.* 346. *With.* 688. *Hull.* 177. *Relh.* 309. *Sibth.* 242. *Abbot.* 171. *Curt. Lond. fasc.* 6. *t.* 58.

H. fruticosum angustifolium majus. *Raii Syn.* 168, *n.* 3; also *n.* 4 and 5.

GATHERED on the beautiful woody hills at the back of Thorpe, near Norwich, where it flowers in August. It loves a dry gravelly or stony soil, and a shady situation among bushes and brakes.

Root perennial, of several simple fibres. Stem erect, 2 or 3 feet high, unbranched, round, leafy, except near the bottom, smooth or slightly downy upwards, terminating in several wavy, scaly, simple, swelling flower-stalks, forming rather a corymbus than an umbel, except from some accidental injury. Leaves numerous, scattered, sessile, linear, or linear-lanceolate, slightly or distantly toothed, dark green, often shining, sometimes downy. Calyx dark green, almost always smooth; the tips of its scales recurved. Corolla of a bright and full yellow, rather large, closed in an afternoon. Seed angular, brown, finely dotted, crowned with rough brownish down. Receptacle in some degree scaly.

This species varies in the breadth, smoothness and teeth of the leaves, which are sometimes almost grassy, especially in Wales and other mountainous countries. No other British Hawkweed can be confounded with it.

1772

1160

Anthemis Cotula.

Aug. 1. 1807. Published by Jas. Sowerby London.

ANTHEMIS Cotula.

Stinking Mayweed or Chamomile.

SYNGENESIA Polygamia-superflua.

GEN. CHAR. *Recept.* chaffy. *Seeds* scarcely bordered. *Cal.* hemisphærical, nearly equal. *Florets* of the radius more than *5*, oblong.

SPEC. CHAR. Receptacle conical; its scales bristle-shaped. Seeds without any border. Leaves doubly pinnatifid, smoothish.

SYN. Anthemis Cotula. *Linn. Sp. Pl.* 1261. *Sm. Fl. Brit.* 906. *Huds.* 373. *With.* 738. *Hull.* 188. *Relh.* 336. *Sibth.* 259. *Abbot.* 186. *Curt. Lond. fasc. 5. t.* 61.

Chamæmelum fœtidum. *Raii Syn.* 185.

WE have alluded to this disagreeable weed in describing *A. arvensis, t.* 602, a much rarer plant. *A. Cotula* is one of the most common of this tribe, in fields and waste ground, flowering from July to September, and is known by the strong scent and acrimony of its herbage and blossoms.

Root annual, small. Stem upright, much branched, leafy, smooth, many-flowered. Leaves alternate, sessile, doubly pinnatifid, cut, narrow, flat, bright green, nearly or quite smooth. Calyx more or less hairy, with narrow, slightly bordered, scales. Disk of the flowers lemon-coloured, convex. Rays white, numerous, elliptical, 3-toothed, reflexed at night. Seeds obovate, furrowed, roughish, quite destitute of any crown or border. Receptacle not merely conical, but almost cylindrical, beset with narrow bristle-like scales, which are shorter than the florets.

1773
1280.

Carex Oederi

Engraved by [illegible]

CAREX Oederi.

Oederian Carex.

MONOECIA Triandria.

GEN. CHAR. Male, *Catkin* imbricated. *Cal.* of one scale. *Cor.* none. Female, *Catkin* imbricated. *Cal.* of one scale. *Cor.* none. *Stigmas* 2 or 3. *Seed* clothed with a swelling tunic.

SPEC. CHAR. Sheaths short, nearly equal to the flower-stalks. Female spikes roundish. Fruit globose with a straight beak, spreading in all directions. Stem smooth.

SYN. Carex Oederi. *Ehrh. Calam.* 79. *Schkuhr. n.* 55. *t.* F. *f.* 26. *Turn. and Dillw. Bot. Guide*, 65. 446. 566. 715.

C. extensa. *Relh.* 367. *Teesd. Tr. of L. Soc. v.* 5. 69.

SENT from Norfolk in July last by Mr. Turner, who mentions it as frequent on all the moist commons about Yarmouth. The synonym of Relhan stands on the authority of this gentleman; that of Teesdale is decided by specimens sent from Beverley by their late worthy finder, which agree exactly with the authentic one among Ehrhart's *Calamariæ*. Yet the original *C. Oederi* of Retzius is asserted by Schkuhr, and agreed by Retzius himself, to be merely *C. pilulifera*; so that Oeder has really nothing to do with the plant before us. The name however may remain, as a warning that such appellations should not be given without absolute certainty.

The species seems to be distinct enough, though it looks at first like one of the many varieties of *C. flava*; but it is less yellow than that species when ripe, the fruit smaller, and essentially different in the beaks being all straight at every period of their growth, never bent down in the singular manner of *C. flava*, *t.* 1291. The perfectly smooth stem, and short sheaths as well as flower-stalks, keep it perfectly distinct from *C. fulva*, *t.* 1295. It is also invariably of more humble growth. The root is perennial, and scarcely creeping.

ATRIPLEX angustifolia.

Spreading Narrow-leaved Orache.

POLYGAMIA Monoecia.

GEN. CHAR. Hermaphr. *Cal.* in *5* divisions, inferior. *Cor.* none. *Stam. 5. Style* cloven. *Seed* 1, depressed. Female, *Cal.* 2-leaved. *Cor.* none. *Style* cloven. *Seed* 1, compressed.

SPEC. CHAR. Stem herbaceous, spreading. Leaves lanceolate, entire; the lower ones somewhat hastate. Calyx of the fruit hastate, slightly tuberculated at the sides.

SYN. Atriplex angustifolia. *Sm. Fl. Brit.* 1092.
A. patula. *Huds.* 443. *With.* 275. *Hull.* 226. *Sibth.* 90. *Abbot.* 219. *Lightf.* 637.
A. patula β. *Relh.* 396.
A. sylvestris angustifolia. *Raii Syn.* 151.

EXTREMELY common in the autumn about dunghills, hedges, and waste ground, accompanying *A. patula, t.* 936. Both are conspicuous for their long straight divaricated branches, laden, toward the close of the year, with the peculiar enlarged calyces, by which an *Atriplex* is known from a *Chenopodium*.

Root annual. Stems even more divaricated than those of *A. patula*, 3 or 4 feet long, of a deep glaucous hue, striated. Lower leaves hastate, but not toothed nor sinuated; upper lanceolate and likewise quite entire; all spreading horizontally. Valves of the fruit-bearing calyx hastate, or triangular with an elongated acute summit, entire at the edge; their disk either quite smooth, or scattered with only a few tubercles. Seed but half the size of *A. patula*, though it is necessary to observe that in our present figure the parts in question are more magnified in proportion, or rather more advanced in age, than those drawn in *t.* 936. We believe the two species to be perfectly distinct.

1775
1832.

Jungermannia pusilla

JUNGERMANNIA pusilla.

Dwarf Jungermannia.

CRYPTOGAMIA Hepaticæ.

GEN. CHAR. Male flowers sessile.
Capsule on a stalk rising from a sheath, of 4 valves.
Seeds attached to elastic filaments.

SPEC. CHAR. Stem creeping. Leaves imbricated in two ranks, angular, without auricles. Sheaths plaited, bell-shaped. Valves of the capsule dilated and jagged.

SYN. Jungermannia pusilla. *Linn. Sp. Pl.* 1602. *Huds.* 518. *With.* 868. *Hull.* 282. *Relh.* 440. *Sibth.* 313. *Abbot.* 255. *Hoffm. Fl. Germ. v.* 2. 90.
Lichenastrum exiguum, capitulis nigris lucidis, e cotylis parvis nascentibus. *Dill. Musc.* 513. *t.* 74. *f.* 46.
L. minimum, capitulis nigris lucidis. *Dill. in Raii Syn.* 110.

RECEIVED from the neighbourhood of Sheffield, by favour of Mr. Jonathan Salt, in April last. It is not a common species, but occurs now and then on moist shady banks.

The stems are short and creeping, throwing out abundance of dark purplish radicles, and clothed with two rows of crowded, or imbricated, bright green leaves, whose form is irregular, somewhat wedge-shaped, and angular. Several sessile bell-shaped sheaths, very much plaited, stand in a row along the upper side of the stem, each producing a short stalk, with a brown capsule, whose valves are dilated and roundish, jagged or notched, and somewhat unequal. The leaves and sheath are finely marked with roundish reticulations.

It seems to us that Mr. Dickson's *J. angulosa* is rightly united to this by Professor Hoffmann, the figure 46 of Dillenius having been taken from imperfect specimens, and *fig.* 22, C, D, E, copied from Micheli, having been drawn from more luxuriant ones, without due attention to the form of the valves. This point, however, we leave for future decision.

In some of our latter descriptions of this genus, we have accidentally referred it to the order of *Algæ* instead of *Hepaticæ*.

1776
1964

Endocarpon sinopicum?

LICHEN sinopicus.

Sinoper Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust rounded, tumid, smooth, tessellated, of a rusty red. Shields minute, sunk, black, depressed in the centre, with an imperfect crenate border of the substance of the crust.

SYN. Endocarpon sinopicum. *Ach. Meth. Suppl.* 30.

FOR this new Lichen we are obliged to Mr. Turner. That gentleman received it from the Rev. Hugh Davies, by whom it was gathered in Anglesea, growing on a piece of yellowish hone schist.

Though small, it is a conspicuous as well as elegant species, forming little rounded tumid smooth patches, a line or more in diameter, and often associated into wider tessellated masses, of a rusty red hue varying in brightness. A few strongly depressed minute dots are situated in each portion of the crust, becoming at length small black shields, hollow in the middle, with a spurious sort of crenate border of the substance and colour of the crust.

Our specimens agree with those communicated by Mr. Wahlenberg, the original discoverer of this species in Lapland.

The specific name alludes to a red kind of stone, called Sinoper, which this Lichen resembles in colour.—Mr. Turner suggests that *Urceolaria diamarta* of Acharius is probably no other than this plant.

1777

2027

Lecidea aromatica.

Aug.1.1801 Published by Jas Sowerby London

LICHEN aromaticus.

Aromatic Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust strongly rooted, indeterminate, of irregular, minute, crowded, smooth, greyish white portions. Shields in the interstices, black, round, concave, with a thick black border.

SYN. Lecidea aromatica. *Turn. MSS.*

OBSERVED on old flint walls, especially where there is a stratum of earth or moss, by Mr. Turner and Mr. W. Borrer, to whom we are entirely indebted for a knowledge of this curious species, which having been sent to Professor Acharius, is allowed by him to be perfectly distinct from all hitherto described.

Its most striking peculiarity is the powerful and highly fragrant scent which this Lichen gives out, in a recent or moist state more especially, when rubbed or bruised. In habit and structure it so nearly resembles *L. cæruleo-nigricans, t.* 1139, that their specific differences can hardly be defined, both being strongly rooted, consisting of crowded or imbricated angular portions, and bearing black concave or flat shields. But *L. aromaticus* is scarcely one fourth so large as the *cæruleo-nigricans,* and the fragments of its crust are less lobed and tumid, of a browner or whiter hue, yet not powdery. The roots, and habit of the crust, distinguish it from *L. atro-albus,* without adverting to the scent.

LICHEN candicans.

Whitish Radiating Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust tartareous, thin, orbicular, plaited, lobed and radiating at the margin, bright greyish white. Shields clustered, greyish black, slightly convex, with a plaited, elevated, white border.

SYN. Lichen candicans. *Dicks. Crypt. fasc.* 3. 15. *t.* 9. *f.* 5. *With. v.* 4. 17. *Hull.* 289.
L. epigeus. *Ach. Prod.* 105.
Parmelia epigea. *Ach. Meth.* 191.

FIRST observed by Mr. Dickson on rocks in Yorkshire, and published by him in 1793. In the following year it was described in Usteri's *Annalen, fasc.* 7. *p.* 25, under the name of *L. melanocarpus*, by the learned Persoon, who discovering that name to be preoccupied, changed it in the same volume, *p.* 155, to *epigeus*, and the latter is adopted by Acharius. We might perhaps waive Mr. Dickson's right of priority, were the name given by him less eligible than the other; but *epigeus* (*growing on the earth*) conveys an erroneous idea, our plant being always found either on hard calcareous rocks or on chalk, as observed by Mr. W. Borrer at Chedder, and near Bristol, as well as on the chalky summit of Beachy head, Sussex.

This is both an elegant and uncommon Lichen. Its thin hard crust is not to be separated, without destruction, from the rock, on which it forms roundish patches, about an inch broad, of a brilliant blueish white, the external part being plaited, lobed and radiating. The surface is smooth and hard. Shields more or less crowded, sessile, round, flattish, greyish black, with a neat, elevated, at length plaited or crisped border, of the colour and substance of the crust.

1779

Aug. 1, 1801, Published by Jas. Sowerby London.

LICHEN Clementi.

Clementine Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.

Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust very mealy, with a membranous, radiating, lobed and finely cut margin, of a whitish unchangeable grey. Shields blueish black, with a white, inflexed, crenate border.

SYN. Parmelia Clementi. *Turn. MSS.*

MR. TURNER has named this new Lichen in honour of our common friend Don Simon de Roxas Clemente, who first found it on olive trees near Cadiz. Mr. Borrer finds the same, not uncommonly, on trees and tiled roofs in Sussex, as well as about Tunbridge wells and Southampton, and has long ago favoured us with specimens.

It is a beautiful species when growing on an even surface, forming roundish patches, about 2 inches or more in diameter, of a light blueish grey, varying but little from moisture, very powdery or mealy about the central part, and often to the very edges. The margin however is naturally membranous, finely lobed and cut, smooth, white beneath, closely attached to the bark or tile, while the powdery part is never lobed nor divided. The shields are few and rare, about the central region, at first concave, and almost covered with their inflexed, thin, crenate border, but at length somewhat larger, with a black disk, clothed, especially when wet, with blueish hoariness.

Mr. Turner justly points out the affinity of this to *L. stellaris*, *t.* 1697. We lament that our plate of the latter, from an unpardonable blunder of the colourers, has a green hue never seen in the plant itself, which has the silvery grey colour of the present species, as was accurately expressed in Mr. Sowerby's original drawing.

1780

Engraved published by J. & A. Arch, Cornhill, London.

LICHEN Borreri.

Borrerian Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Leafy, slightly imbricated, tawny grey, even, sprinkled with white powdery warts; its segments sinuated, rounded at the ends: brown and fibrous beneath. Shields bright chesnut.

SYN. Parmelia Borreri. *Turn. MSS.*

THIS has certainly been overlooked by all botanists for *L. saxatilis*, *t.* 603, till Mr. W. Borrer distinguished it, whom Mr. Turner has justly commemorated in its name. Those great cryptogamists Professors Acharius and Swartz having allowed it to be a distinct species, we cannot refuse our assent.

L. Borreri is observed by its first discoverer to be not uncommon on the trunks of trees, especially fruit-trees, in Sussex. It is also met with on stones. Mr. Turner has noticed it about Norwich and Coltishall, nor is it, probably, uncommon in other places. The shields are of very rare occurrence, but these scarcely differ from those of *L. saxatilis*. The frond is observed to differ from the latter, with which it often grows intermixed, in being less deeply divided, its segments more dilated and rounded, its under side paler and less densely hairy, and its upper more inclined, when moist, to a greenish yellow hue. Its essential difference, however, consists in its want of those elevated reticulated powdery veins, and consequent pits, always observable in the *saxatilis*; while, on the contrary, it is sprinkled with innumerable round, white, powdery warts over the surface, not seen in that species.

1781

2245.

Ramalina fraxinea?

LICHEN fraxineus.

Leafy Ash Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Leafy, tufted, somewhat cartilaginous, pitted, smooth, greyish white; its segments linear-lanceolate, acute, jagged. Shields pale, scattered, stalked.

SYN. Lichen fraxineus. *Linn. Sp. Pl.* 1614. *Ach. Prod.* 175. *Huds.* 541. *With. v.* 4. 56. *Hull.* 297. *Relh.* 467. *Sibth.* 330. *Abbot.* 266.
Lichenoides longifolium rugosum rigidum. *Dill. Musc.* 165. *t.* 22. *f.* 59.
L. arboreum ramosum scutellatum majus et rigidius, colore virescente. *Raii Syn.* 75.
Parmelia fraxinea. *Ach. Meth.* 258.
Platisma fraxineum. *Hoffm. Pl. Lich. v.* 1. 85. *t.* 18. *f.* 1, 2.

VERY common on the large branches of old trees, particularly the Ash and Oak, bearing shields copiously at all seasons.

The fronds grow in large tufts of a pale greenish hue, white when dry, from 2 to 6 inches in length, composed of numerous, flattish, pliable, linear-lanceolate, acute, jagged or compound segments; even when young, but soon becoming pitted and wrinkled; destitute at all times of every kind of pubescence or roughness. Shields numerous, from both sides as well as edges of the leaves, on short stalks, various in size, concave, pale buff, sometimes flesh-coloured, at length rugged and blackish: their border small and thin.

It is the largest British Lichen of its tribe, and sufficiently distinguishable from all others.

1782

2280

Scyphophorus mutophyllus.

Lond. Pubd. 1 Feb. 1783 by Lee & Sowerby, London.

LICHEN microphyllus.

Small-leaved Spurious Cup Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Leaves minute, somewhat imbricated, rounded, nearly entire. Fruit-stalks simple, tubular, smooth. Tubercles solitary, capitate, convex, brown, somewhat lobed.

SYN. Bæomyces microphyllus. *Achar. MSS.*

GATHERED by Mr. W. Borrer, on wet heathy places in Tilgate and St. Leonard's forests, Sussex, in the winter, but not frequently. It was at first thought the *Bæomyces cariosus* of Acharius, but, on being sent to that able botanist, was determined by him to be a new species, and named as above. We retain his specific name, though there has been a *Lichen microphyllus* already, our *carnosus*, *t.* 1684; for, as it is probable the genus of *Bæomyces* may be established, there will then be no ambiguity.

The crust or ground of the plant before us consists of numerous, crowded or imbricated, little green round concave leaves, scarcely lobed or cut, white beneath. Fruit-stalks scattered, ascending, scarcely above a quarter of an inch high, simple, white and shining, tubular, swelling upwards, each bearing a round, capitate, reddish brown, undivided tubercle, often lobed, but not perforated, much exceeding the stalk in diameter.

1783
690

Prunus domestica

Sept. 1. 1789 Published by Jas. Sowerby, London.

PRUNUS domestica.

Wild Plum-tree.

ICOSANDRIA Monogynia.

GEN. CHAR. *Cal.* 5-cleft, inferior. *Pet.* 5. *Stone* of the *drupa* with slightly prominent seams.

SPEC. CHAR. Flower-stalks mostly solitary. Leaves lanceolate-ovate, convolute when young. Branches without spines.

SYN. Prunus domestica. *Linn. Sp. Pl.* 680. *Sm. Fl. Brit.* 527. *With.* 456. *Hull.* 108. *Ger. em.* 1497. *Woodv. Med. Bot. t.* 85.

P. communis δ. *Huds.* 212.

P. curvata. *Ehrh. Arb.* 144.

GATHERED by Mr. W. Borrer at Twineham, Sussex, apparently in a wild state, the blossoms early in May, the fruit late in August.

This is a larger tree than *P. insititia*, *t.* 841, and further differs from that in being destitute of thorns. The flower-stalks moreover are reported to be most frequently solitary, and the fruit is more inclined to be elliptical or obovate; but this, as appears by our figure, is not constant, neither do we find the number of the flower-stalks to be depended on.

We are persuaded Mr. Hudson has done right in considering these trees as one species, the thorns probably disappearing by culture as in the *Pyrus communis*. Whether from the curvature of the style we know not, but Ehrhart has distinguished this among his *Arbores exsiccatæ* by the above name, without any specific definition. If the curvature alluded to be constant, it might serve as a character; but we find great reason, from Ehrhart's own specimens, to doubt it; nor is this author of great authority in the genus in question, he having separated the cherry tribe into species, by the truly puerile distinction of the colour of their juice alone.

An error in our character of *P. insititia* requires correction; the young leaves are "convolute," or "coiled inward," not revolute.

1784
695.

Pyrus communis.

Sept. 1. 1784. Published as the Act directs by Jas. Sowerby, London.

PYRUS communis.

Wild Pear-tree.

ICOSANDRIA Pentagynia.

GEN. CHAR. *Cal.* 5-cleft. *Petals* 5. *Apple* inferior, of from 2 to 5 cells. *Seeds* in pairs.

SPEC. CHAR. Leaves simple, ovate, serrated. Flower-stalks corymbose.

SYN. Pyrus communis. *Linn. Sp. Pl.* 686. *Sm. Fl. Brit.* 531. *Huds.* 216. *With.* 462. *Hull.* 109. *Relh.* 190. *Sibth.* 156. *Abbot.* 109.
Pyraster, seu Pyrus sylvestris. *Raii Syn.* 452.

FOUND wild at Cuckfield, Sussex, by Mr. W. Borrer, blossoming early in May, and ripening its fruit towards the end of August. In Worcestershire, particularly, the snow-white blossoms of this tree make a beautiful appearance in the hedges in spring.

The tree is tall and handsome, the wood light, fine-grained, and tolerably hard. The branches grow first erect, and are then curved downwards and gracefully pendulous. Leaves ovate or elliptical, bluntish, serrated, but the serratures disappear by culture, as do the thorns which sometimes occur on very wild starved pear-trees. The young leaves are downy beneath, and fringed with white. Stipulas linear. Flowers in a terminal downy corymbus; not umbellate as in the Apple, *t.* 179. Styles 5. Fruit obovate, generally hard and austere, but the specimens sent by Mr. Borrer proved sweet and agreeable. In fact, wild pears vary much in flavour, as well as wild crab-apples; though the cultivated varieties of both are, as every body knows, still more different. The iron pear is absolutely not eatable.

1785.

739.

Potentilla Fragariastrum

Sept.ª 1.1807. Published by Jas. Sowerby, London.

FRAGARIA sterilis.

Barren Strawberry.

ICOSANDRIA Polygynia.

GEN. CHAR. *Cal.* inferior, in 10 segments. *Petals* 5. *Receptacle* of the seeds ovate, pulpy, deciduous. *Seeds* smooth.

SPEC. CHAR. Stem decumbent. Flowering branches weak, each bearing one or two flowers.

SYN. Fragaria sterilis. *Linn. Sp. Pl.* 709. *Sm. Fl. Brit.* 546. *Huds.* 222. *With.* 472. *Hull.* 112. *Relh.* 196. *Sibth.* 160. *Abbot.* 112. *Curt. Lond. fasc.* 3. *t.* 30. *Raii Syn.* 254.

FREQUENT in dry gravelly pastures, where its blossoms appear in March and April, but are followed by no eatable fruit: hence it has acquired the above name.

Root perennial and somewhat woody, externally black, bearing many spreading, decumbent, leafy stems, but no creeping runners. Leaves on long hairy stalks; their leaflets broad and roundish, coarsely serrated, hairy and silky, especially beneath. Flowering branches loosely spreading, bearing one or two leaves, and as many flowers, which are more delicate than those of *F. vesca*, *t.* 1524. Calyx hairy, as long as the petals. Receptacle of the seeds small and dry when ripe, scarcely deciduous as the generic character requires, yet it is present, and the seeds moreover, when perfect, are smooth, or very slightly wrinkled.

The habit and seeds of this plant so perfectly agree with *Fragaria*, that botanists have overlooked the want of a pulpy fruit, in which last respect it rather accords with *Potentilla*.

1786

888

Orobanche rubra.

Sept.1.1787 Published by Jas. Sowerby London.

OROBANCHE rubra.

Red Fragrant Broom-rape.

DIDYNAMIA Angiospermia.

GEN. CHAR. *Cal.* in 2, lobed, lateral segments. *Cor.* ringent. *Caps.* of 1 cell, with 2 valves, and many seeds. A gland at the base of the germen beneath.

SPEC. CHAR. Stem simple. Corolla tubular; its upper lip cloven; lower in three nearly equal segments. Stamina fringed on one side at the base, germen and style at their summits. Bracteas solitary.

THIS curious species of *Orobanche*, which appears to be hitherto entirely undescribed, was discovered by John Templeton, Esq. growing plentifully on the basaltic rock at Cavehill near Belfast, in August 1805. We are obliged to that gentleman for a coloured drawing of it, exactly copied in our figure, and to Mr. Rees of Paternoster-row, for specimens gathered at the same place by himself. Mr. Templeton observes that, though there are plenty of similar situations, he never found the plant but in the spot above mentioned.

Roots creeping on the rock, and following the inequalities of its surface, covered with about 5 inches of decayed rock and zeolite. Short grass, *Campanula rotundifolia* and *Thymus Serpyllum* accompany the plant, but Mr. Templeton could never, on the most careful examination, find the roots to be parasitical on any others. Stem simple, often a foot high, bulbous and most scaly at the base, ending in a spike of near 20 flowers, and clothed, as well as the upper part of the corolla, with glandular viscid hairs. Bracteas solitary, lanceolate, acute. Calyx-leaves undivided. Corolla very slightly inflated, fringed with glandular hairs; its upper lip cloven, lower in 3 flat rounded segments, of which the central one, magnified in our plate, is rather the largest. Filaments fringed at one edge near the base, as are the germen and style at their upper parts. Style red. The whole plant above ground is of a purplish red. The flowers smell very powerfully like a honeysuckle or pink.

In describing *Centaurea Jacea*, *t.* 1678, we ought to have mentioned Mr. Templeton's having in 1796 sent a wild specimen of that plant from Ireland, which had escaped our memory.

1787

1622

Orthotrichum pulchellum.

Sept. 1, 1797. Published by Jas. Sowerby, London.

ORTHOTRICHUM pulchellum.

Elegant Smooth Bristle-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* oblong, terminal. *Outer fringe* of 16 teeth: *inner* of 8 or 16 bristles; or none. *Veil* angular, mostly clothed with erect hairs.

SPEC. CHAR. Stem somewhat branched. Leaves lanceolate, keeled, revolute, beardless, slightly twisted when dry. Inner fringe of sixteen bristles. Capsule with eight furrows. Veil naked.

SYN. Orthotrichum pulchellum. *Brunt. MSS. Winch Bot. Guide, v.* 2. 23.

THIS *Orthotrichum*, found by Mr. Winch and Mr. Thornhill on trees in Causey wood, also at Pont Bourn, and other places in the county of Durham, was justly determined as a new species by the late Mr. W. Brunton of Rippon, of whose observations we have partly profited in the following description.

The stems grow in tufts, and are about 3 lines high, somewhat branched or divided. Leaves bright green, lanceolate, acute, beardless, keeled, single-ribbed, revolute, entire, spreading; slightly twisted, but not curled, when dry. Fruitstalks longer than the leaves, solitary, twisted, yellowish, upright. Capsule erect, cylindrical inclining to ovate, pale, with 8 distinct ribs and as many furrows. Lid shortish. Fringe of 16 red, spreading, external teeth, and as many internal, inflexed, pale bristles. Veil conical, smooth and shining, destitute of hairs, crenate at the base.

1788
1809

Jungermannia asplenioides

Sept.r 1.st 1809. Published by Jas. Sowerby, London.

JUNGERMANNIA asplenioides.

Spleenwort Jungermannia.

CRYPTOGAMIA Hepaticæ.

GEN. CHAR. Male flowers sessile.

Capsule on a stalk rising from a sheath, of 4 valves. *Seeds* attached to elastic filaments.

SPEC. CHAR. Shoots somewhat branched. Leaves crowded, in two rows, without auricles, obovate, oblique, finely toothed. Fruitstalks terminal.

SYN. Jungermannia asplenioides. *Linn. Sp. Pl.* 1597. *Huds.* 509. *With.* 870. *Hull.* 277. *Relh.* 437. *Sibth.* 308. *Abbot.* 252. *Hedw. Theor.* 151. *t.* 16, 17.

Lichenastrum asplenii facie. *Dill. Musc.* 482, 483. *t.* 69. *f.* 5, 6.

L. trichomanis facie, capitulis e foliorum summitate enascentibus, majus. *Dill. in Raii Syn.* 112.

FOUND in woods and moist shady places, bearing capsules early in the spring, and remarkable, like many of its genus, for diffusing a sweet scent when growing in very wet situations.

Root perennial, creeping, but little branched. Stems procumbent, slightly branched, round, smooth, leafy, not throwing out any radicles. Leaves more or less closely crowded in two ranks, light green, dotted, oblique, unequal, obovate, finely and sharply toothed, without rib or auricles. Sheaths terminal, solitary, tubular, jagged at their orifice, curved when young, then erect. Fruitstalk four times as long as the sheath, white and tender. Capsule black, of 4 acute valves.

1789
1817

Opegrapha rufescens

Scott Sailer Published as the Act directs by J. Lee, Lond.

OPEGRAPHA herpetica.

Eruptive Opegrapha.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* in black, linear, sessile, simple or branched, bordered *clefts*, in an uninterrupted crust.

SPEC. CHAR. Crust tumid and somewhat rugged, brownish olive grey. Clefts prominent, crowded, simple, oblong, convex, irregular.

SYN. Opegrapha herpetica. *Ach. Meth.* 23. *Winch Bot. Guide, v.* 2. 30.
Lichen herpeticus. *Ach. Prod.* 20.

DR. SWARTZ, who first determined this species, has favoured us with a Swedish specimen, according precisely with those, found by Mr. Turner on trees about Yarmouth, whence our figure was taken.

It is known by its uneven crust, of a dirty olive brown or grey, which is described by Acharius as bordered with black, a character scarcely perceptible in any specimens we have seen. The fructification is minute, consisting of very irregular, crowded, little, short, black clefts, variously divaricated and curved occasionally, but scarcely ever cloven, much less branched: at length they become turgid, with roughish or jagged edges.

1790
1924

Opegrapha saxatilis

Sepia ad viv. Published by Jas Sowerby London

OPEGRAPHA calcarea.

Chalky Opegrapha.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* in black, linear, sessile, simple or branched, bordered *clefts*, in an uninterrupted crust.

SPEC. CHAR. Crust thick, chalky, very white. Clefts prominent, aggregate, radiant, coal-black.

SYN. Opegrapha calcarea. *Turn. MSS.*

ONE of the most striking and distinct species of *Opegrapha*, which we have long known on the mortar of old walls in Norfolk and Suffolk, but which has been passed over as a variety of some more common species growing on trees. Mr. Turner has at length defined it, nor, since the genus has been studied, can there be a doubt of its difference from all hitherto-described species.

The crust is very conspicuous for its brilliant whiteness, and unpolished chalky surface. The fructification is observed by Mr. Turner to originate in little dots, each of which at length becomes a more or less compound assemblage of radiating, tumid, prominent clefts, no less remarkable for their deep black hue than the crust is for its pure whiteness. Each cleft has a strong longitudinal black furrow, with a thick, rounded, simple border on each side.

1791

2084.

Lecanora sophodes.

Sept. 1. 1801. Published by Jas. Sowerby London.

LICHEN sophodes.

Obscure Black-shielded Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust orbicular, granulated, dull greenish ash-colour. Shields slightly convex, clustered, black, with an elevated, entire border, coloured like the crust.

SYN. Lichen sophodes. *Ach. Prod.* 67.
Parmelia sophodes. *Ach. Meth.* 155.

THAT this little-known Lichen is distinct from *ater, t.* 949, no botanist can scruple to admit, and as such we venture to publish it. Acharius says it is an intermediate species between that and his *exiguus;* but as we find it difficult, even with specimens before us communicated by that learned writer, to settle our opinion of the latter, we leave it in doubt.

L. sophodes is found by Mr. W. Borrer to be common upon trees in Sussex, and Mr. Turner has also sent it from Yarmouth. The crust when young is circular, consisting of little granulations, which give it an evident substance or thickness. The surface is not at all mealy; its colour an obscure greenish grey, very different from the occasional varieties of colour in that of *L. ater.* Shields numerous, crowded, small, each proceeding from a minute granulation; their disks flattish at first, then convex, of a not very intense black. Border elevated, of the substance and colour of the crust, smooth and entire, except at an advanced age, when it becomes a little wrinkled.

1792

2169

Lecanora vitellina?

Sept. 1. 1797. Published by Jas. Sowerby London.

LICHEN vitellinus.

Yolk of Egg Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust leprous, granulated, indeterminate, bright greenish yellow. Shields clustered, sessile, flat, tawny yellow, at length convex and brownish. Border elevated, crenate, the colour of the crust.

SYN. Lichen vitellinus. *Ehrh. Crypt.* 155. *Ach. Prod.* 41. *Relh. Cant.* 450.
L. candelarius. *Huds.* 528. *With. v.* 4. 27. *Hull.* 292. *Sibth.* 323. *Lightf.* 811, *α.*
Patellaria vitellina. *Hoffm. Pl. Lich. v.* 2. 5. *t.* 26. *f.* 1. *t.* 27. *f.* 2.
Parmelia vitellina. *Ach. Meth.* 176.

VERY common on garden pales, rails, and other wrought wood, especially deal, when long exposed to the weather; but scarcely, if at all, on the bark of trees. It is most perfect in the wet wintry months. Sometimes it occurs on brick walls.

The crust spreads in oblong patches, frequently conforming to the grain of the wood, and consists of minute granulations, more or less scattered, of a very conspicuous yellow colour inclining to green, looking as if the boards had been besmeared with yolk of egg. Shields not very abundant, but crowded when they occur, sessile and flat, of a more dull and tawny yellow than the crust, but surrounded with an elevated, crenate, or granulated, very conspicuous border, very like it. By age the disk of the shields becomes somewhat convex, as well as olive or brownish.

Our British writers have, not without apparent reason, taken this for the Linnæan *L. candelarius*, and much misconception and confusion have arisen from its being confounded by Dillenius and others with *L. murorum* of Acharius. Ehrhart first determined it, and we gladly retain his expressive name. What the real *candelarius* is will appear at *t.* 1794.

1793

2108

Lecanora *citrina*?

Sept.r 1st 1793. Published by Jas. Sowerby London.

LICHEN citrinus.

Lemon-coloured Wall Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust leprous, powdery, indeterminate, bright lemon-coloured. Shields scattered, sessile, minute, orange-coloured, with a pale yellow, powdery border.

SYN. Lichen citrinus. *Ach. Prod.* 73.
L. candelarius. *Abbot.* 262?
Lichenoides. *Dill. Musc.* 136. *t.* 18. *f.* 18. B?
Parmelia citrina. *Ach. Meth.* 179.
Verrucaria citrina. *Hoffm. Fl. Germ. v.* 2. 198.

IT appears from the works of Acharius that he had never seen specimens of this plant, but adopted it from Hoffmann, who seems however, by his *Flora*, to have confounded it with *vitellinus*, *t.* 1792. Most botanists have done the same, and we are obliged to Mr. Turner for first explaining the species to us, since which we have found no difficulty in distinguishing it at any time.

This species is very common, and, in the wet months of the early spring, very conspicuous and brilliant, on brick or flint walls in Norfolk, and probably other places. Mr. Hailstone has sent it on wood, from Yorkshire. The crust is moderately thick, friable, powdery, cracked when dry, of no determinate figure, and often irregularly dispersed, of a fine lemon-colour. Shields not very copious, scattered, minute, sessile and imbedded in the powder of the crust; their disk flat, deep yellow or palish orange-coloured; their border thick, elevated, powdery and paler like the crust.

We are convinced of this being distinct from our *Lepraria flava*, *t.* 1350, as well as from *L. vitellinus*, *t.* 1792, the texture of the crust being very different from both. Concerning another suggestion of the learned Acharius, whether this species may ever become his *L. candelarius*, *t.* 1794, we speak with more diffidence, but we think it very improbable, that being in every stage truly leafy or frondose, its fronds bearing the shields.

1794

2121.

Squamaria candelaria?

Sept.r 1.st 1794. Published by Jas. Sowerby, London.

LICHEN candelarius.
Yellow Candle Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Fronds crowded, upright, entangled, yellow, minutely lobed, jagged, and divaricated. Shields minute, flat, of the same colour, with a thick inflexed margin.

SYN. Lichen candelarius. *Linn. Sp. Pl.* 1608. *Fl. Suec. ed.* 2. 408. *Ach. Prod.* 92. *Westring. Lafv. fasc.* 2. 21. *t.* 5. *Hoffm. Enum.* 57. *t.* 9. *f.* 3. *Relh.* 457?

L. concolor. *Dicks. Crypt. fasc.* 3. 18. *t.* 9. *f.* 8. *With. v.* 4. 62. *Hull.* 298. *Abbot.* 265.

Parmelia candelaria. *Ach. Meth.* 187.

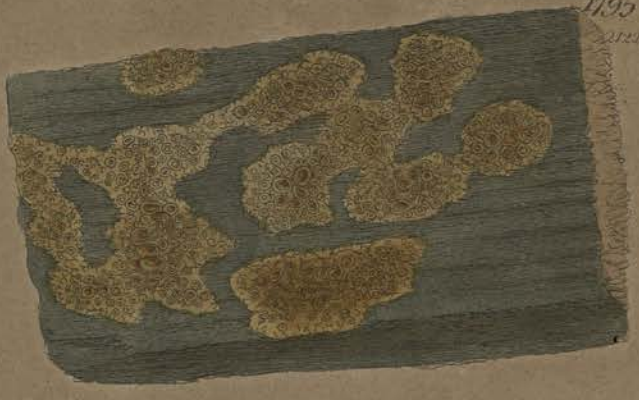
NOT very unfrequent on old oaks, barn doors, posts, or rocks, in which last situation we first noticed it at Blackford hill near Edinburgh in 1782. Our botanists in general have confounded it with *L. vitellinus*, *t.* 1792, from which, considered as the true *candelarius*, Mr. Dickson justly distinguished this by the apt name *concolor*. Although the Linnæan herbarium contains no authentic specimen, we must rely on the Swedes for determining this species, it being well known among them, and used for staining candles yellow at festivals. The admirable plate in Mr. Westring's work on the uses of Swedish Lichens in dyeing, drawn by no less a hand than the celebrated Acharius himself, clearly ascertains the plant.

The fronds are seldom more than a quarter of an inch high, and grow in dense patches, upright, but closely entangled, and when young somewhat imbricated. Each is much branched and divaricated, flattened, minutely and sharply cut and jagged; the ultimate segments obtuse, rather powdery. Shields small, scattered, lateral, nearly sessile, flattish, with a thick inflexed border externally warty. The colour of the whole varies from a pale greenish lemon to a golden hue, but the bases of the fronds are pale or whitish, and the disk of the shields orange.

We conceive this to be by no means a crustaceous Lichen, and that it is more allied to *vulpinus* than to any with which it has been compared or confounded.

1795

2122.



Squamaria polycarpa

Oct 1st 1795. Published by Jas. Sowerby, London.

LICHEN polycarpus.

Yellow Many-fruited Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Fronds creeping, crustaceous, wrinkled, greyish yellow, lobed and toothed. Shields very numerous, crowded, flat, orange, with a thick inflexed, greenish margin.

SYN. Lichen polycarpus. *Ehrh. Crypt.* 136.
Lobaria polycarpa. *Hoffm. Fl. Germ. v.* 2. 159.
Parmelia candelaria β. *Ach. Meth.* 187.

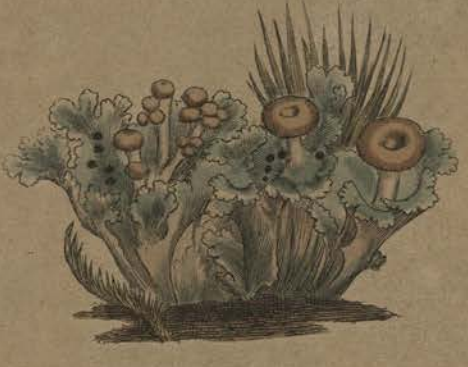
FOUND frequently on wooden rails and pales long exposed to the weather. Mr. Turner showed it to us in great perfection near Yarmouth, whence our specimen was taken.

The fronds when young form little round patches, of a greenish grey tinged with yellow when growing on branches of trees, or in the shade, but in exposed sunny places they assume more of a golden hue. They creep slowly over the wood, and are wrinkled or puckered, their margin lobed and jagged. By age they assume the appearance of a wide-extended, broken or scattered, crust. The under part and inner substance are whitish. Innumerable shields, elevated on thick short stalks, cover the frond even from its earliest growth, and at length not only crowd but overlay one another. Their disk is flattish, always deep orange-coloured; their margin of the hue of the frond, inflexed, thick when young, at length thinner and sharpish.

L. candelarius often grows intermixed with this, but their fronds appear to us perfectly distinct in nature under every variety of form. *L. polycarpus* may perhaps have been taken by some British botanists for *juniperinus*, a species not found in this country.

1796

2278



Scyphophorus cæspitulus

Oct. 1.1801. Published by Jas. Sowerby London

LICHEN cæspititius.

Green Turfy Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Fronds clustered, ascending, leafy, pinnatifid, cut and crisped; bright green above; white beneath. Tubercles from the disk of the leaf, convex, reddish brown, on tubular stalks.

SYN. Bæomyces cæspititius. *Persoon in Ust. Annal. fasc.* 7. 155. *Ach. Meth.* 325.

THE only knowledge we have of this elegant plant is from specimens gathered on the mossy trunk of an aged oak in the New Forest, Hants, by C. Lyell, Esq., last October. We have no specimen from Professor Acharius, nor from the original discoverer and describer of the species, the celebrated Persoon; but their descriptions leave no doubt upon our minds.

The fronds form broad patches among moss, upon the ground or decayed trunks of trees, and are upright or ascending, clustered, but not very closely crowded, a quarter or half an inch high, each spreading from a tapering tubular base into a sort of cornucopiæ form, dilated upwards, pinnatifid, jagged, crisped and spreading at the extremities; the upper surface concave, of a bright pea-green; the under convex, and, as well as the crisped edges, white. Tubercles one or more from the central upper part of each leaf, convex, often umbilicated, of a light red brown, on shortish, tubular, pale stalks, one of which sometimes bears several tubercles. Small dark brown sessile warts also occur on the disk of the leaves. This species is one of those nearly allied to the Cup Lichens both in the fronds and tubercles, but which do not bear cups.

1797

Octr 1st 1797. Published by Jas Sowerby London.

RIVULARIA elegans.

Elegant Rivularia.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Frond* gelatinous, firm, destitute of an external cuticle. *Fructification* among jointed filaments, lodged in the substance of the frond.

SPEC. CHAR. Globose, lobed, sessile, light green. Internal filaments forked and divaricated; their ultimate branches clustered and curved; their joints somewhat swelling.

SYN. Rivularia elegans. *Roth in Sims and Konig's Ann. of Bot. v.* 1. 259. *Catalect. v.* 3. 337.

Batrachospermum fasciculatum. *Vaucher Conf.* 116. *t.* 13. *f.* 1.

THIS plant is found in fresh water, either running or stagnant. Mr. W. Borrer sent it from the neighbourhood of Hurstperepoint, Sussex, in March 1806; Mr. Turner had for some years before observed it to be common about Yarmouth, and had ascertained the synonym of his learned correspondent Dr. Roth, who first established and characterized the genus of *Rivularia*, to which we have alluded in *v.* 20. *t.* 1378, and which, having lately become acquainted with all his observations respecting it, we gladly adopt. The generic character is sufficiently expressed above. Its habit is gelatinous like a *Tremella*, but more firm; and an essential difference is observable in the want of a cuticle or skin, instead of which most species, if not all, are covered externally with fine white colourless filaments. The internal structure is a mass of filaments, simple or branched, more or less jointed, resembling a *Conferva*. Our *t.* 967, 968, 1378, belong to this new genus.

The present species is light green, growing in crowded globose, lobed masses, scarcely more than a line thick, on sticks or leaves in the water. When examined under a powerful lens, the internal filaments are found much branched and divaricated, their ultimate branches crowded and generally curved, their joints numerous, rather swelling than exactly cylindrical: the superficial filaments are very fine and scarcely discernible.

1798

2549

Rivularia atra

Oct. 1. 180[illegible] Published by Jas. Sowerby, London

RIVULARIA atra.

Small Black Rivularia.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Frond* gelatinous, firm, destitute of an external cuticle. *Fructification* among jointed filaments, lodged in the substance of the frond.

SPEC. CHAR. Hemisphærical, solitary, sessile, hard, black. Internal filaments straight, compact, branched, concentric, green; their joints cylindrical.

SYN. Rivularia atra. *Roth Catalect. v. 3. 340.*

COMMUNICATED by Mr. W. Borrer, in Oct. 1806, from the piles of Yarmouth *jetty*, or *jutty*, which are constantly washed by the sea. Mr. W. J. Hooker has observed the same species on mud in the salt-marshes at Cley.

Dr. Roth justly compares its size to the seeds of mustard or hemp. It grows more or less scattered, each plant being solitary and unconnected, sessile, hard, of so very dark a green as to look black, having a slimy gloss from the pellucid, colourless, soft, gelatinous superficial filaments. A perpendicular section shows the internal filaments to be of a dull green, radiating from the centre, closely compacted and parallel, but branched. Their joints appear to us numerous, short, cylindrical: Roth describes them as few and very long.

1799

2550

Rivularia calcarea

Published by Jas. Sowerby, London

RIVULARIA calcarea.

Calcareous Rivularia.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Frond* gelatinous, firm, destitute of an external cuticle. *Fructification* among jointed filaments, lodged in the substance of the frond.

SPEC. CHAR. Hemisphærical, clustered, sessile, hard, green. Internal filaments straight, compact, entangled, simple, with scarcely any appearance of joints.

SENT by Dr. Scott from the bed of a river in Queen's county, Ireland. We have been informed by several friends that this singular production is plentiful about many water-falls in North and South Wales, Shropshire, &c. There can be no doubt of its ranking as a new species of *Rivularia*.

The fronds are sessile, round, generally clustered or aggregate, each as big as a pea, or larger, but often united into an uneven indeterminate mass. The external surface is of a rich dark green, slimy to the touch from the fine short superficial filaments. Internally the mass is paler and brownish, composed of dense, parallel, entangled, but apparently unbranched, filaments, of an equal thickness throughout, and, as far as we can discern, destitute of joints. The whole is impregnated with a calcareous sediment, from the petrifying nature of the water in which it grows, which renders it hard, though friable, and increases the difficulty of detecting the real organization of its filaments. This calcareous matter, or *stalagmite*, is found by itself, in granulated masses, on the adjoining parts of the stone where this *Rivularia* grows.

1800

2553.

Palmella cruenta?

Oct. 1.1807. Published by Ja.ᵉ Sowerby London.

TREMELLA cruenta.

Gory Tremella.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Fructification* scarcely perceptible, in a membranous jelly-like substance.

SPEC. CHAR. Minutely granulated, diffuse, indeterminate, shining, dark purple.

COMMON about the lower parts of walls in damp situations, even in the streets of close towns, during the wet wintry months. In such situations it forms broad indeterminate patches, of a deep rich purple, with a shining surface, as if blood or red wine had been poured over the stone or ground. When examined with a microscope, it proves to be a congeries of extremely minute, pellucid, globular granulations, all equal in size. No particular scent or flavour is observable, nor does this production appear to have any affinity, as we once thought it might, to *Byssus* (or *Lichen*) *Jolithus*; neither is it alluded to in the Rev. Mr. Starke's paper of inquiry concerning that plant. See *Sims and König's Ann. of Bot. v.* 1. 283.—We have thought it worth while to commemorate this vegetable, as no botanist can overlook its existence, though he may be puzzled where to place it. We are well aware that it can only rank as a *Tremella* till more observations are made on the subject; but it certainly agrees better with that genus than with any other established one. When gathered in a perfect state it dries well, and retains its colour.

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——— diaphana	1742
——— flocculosa	1761
——— fluviatilis	1763
——— fucoides	1743
——— mutabilis	1740
——— polymorpha	1764
Erodium cicutarium	1768
Fragaria sterilis	1785
Fucus bulbosus	1760
—— esculentus	1759
—— membranaceus	1758
—— rotundus	1738
Hieracium umbellatum	1771
Jungermannia asplenioides	1788
——— pusilla	1775
Lichen agelæus	1730
——— aromaticus	1777
——— Borreri	1780
——— cæspititius	1796
——— candelarius	1794
——— candicans	1778
——— cinereus	1751
——— citrinus	1793
——— Clementi	1779
——— dendriticus	1734
——— fibrosus	1732
——— fraxineus	1781
——— granulatus	1757
Lichen Griffithii	1735
——— hymenius	1731
——— microphyllus	1782
——— obscurus	1752
——— polycarpus	1795
——— rimosus	1736
——— rivulosus	1737
——— sinopicus	1776
——— sophodes	1791
——— tuberculosus	1733
——— vitellinus	1792
Medicago sativa	1749
Opegrapha calcarea	1790
——— dendritica	1756
——— denigrata	1753
——— herpetica	1789
——— pulverulenta	1754
——— serpentina	1755
Orobanche rubra	1786
Orthotrichum pulchellum	1787
Peucedanum officinale	1767
Prunus domestica	1783
Pyrus communis	1784
Rivularia atra	1798
——— calcarea	1799
——— elegans	1797
Sinapis arvensis	1748
Sisymbrium terrestre	1747
Tremella cruenta	1800
Trifolium pratense	1770
——— repens	1769
Turritis alpina	1746
Vaucheria geminata	1766
——— sessilis	1765
Ulva compressa	1739
Urtica dioica	1750

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